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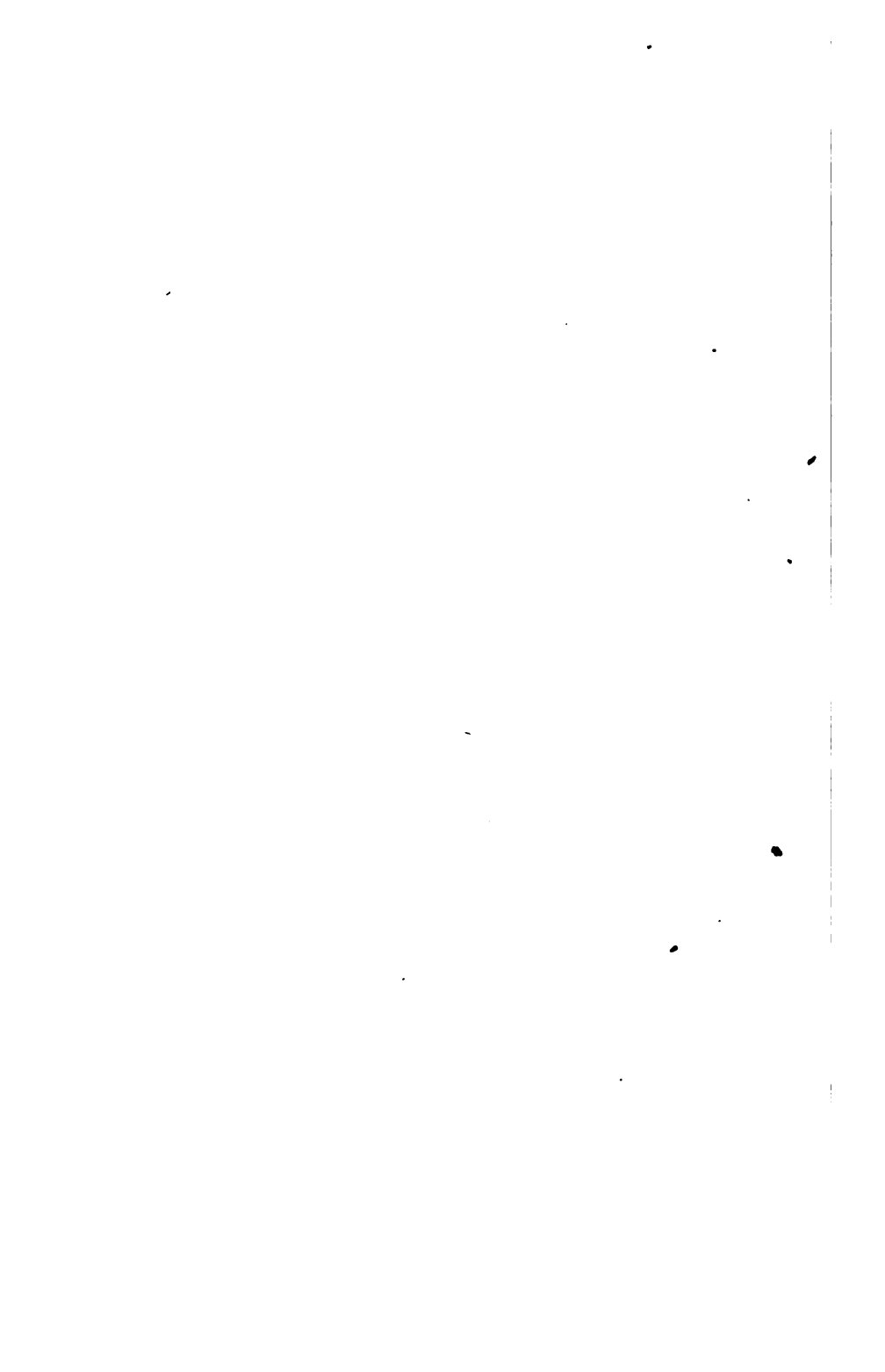
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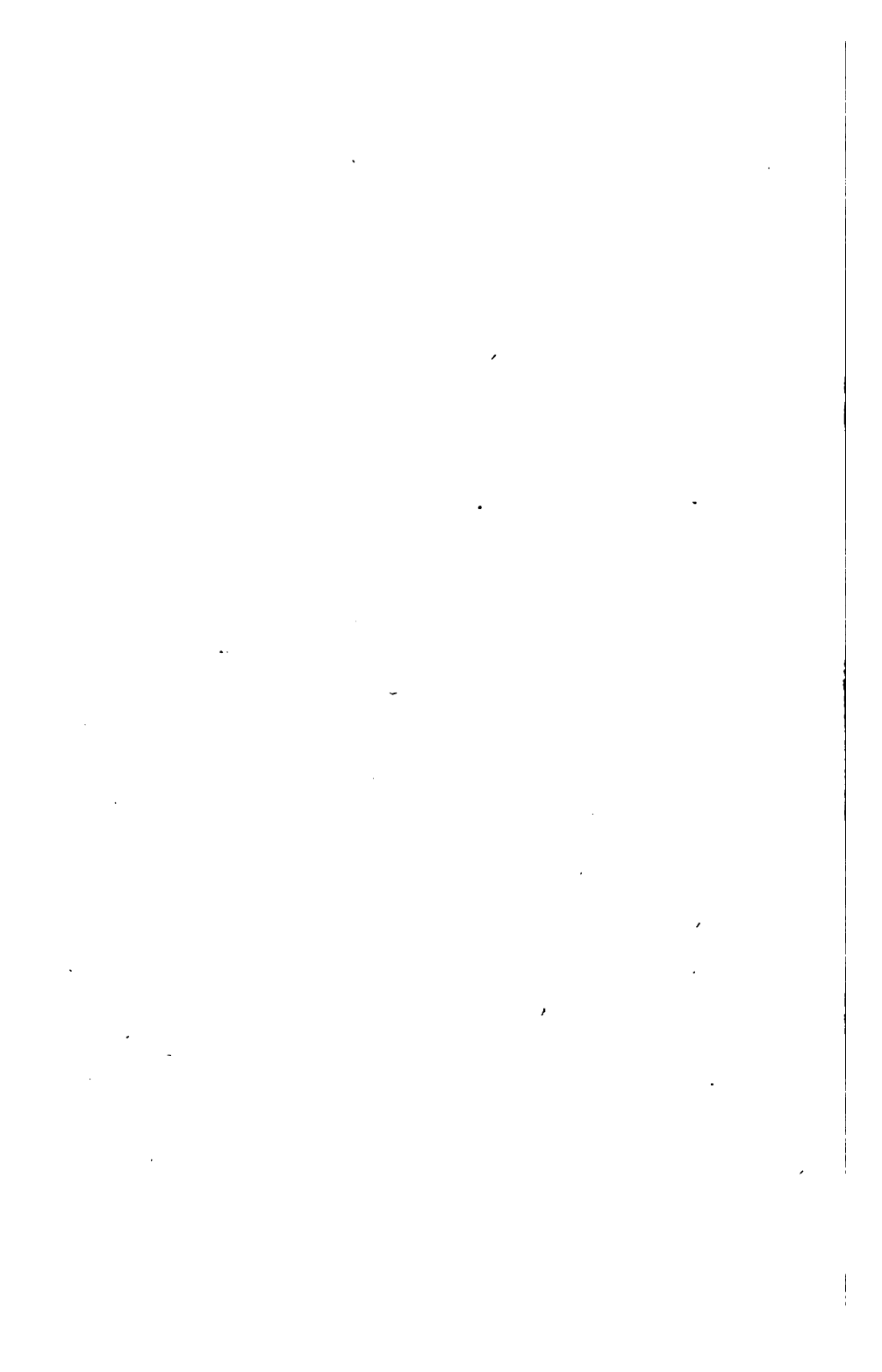








A
PRACTICAL TREATISE
ON
DISEASES OF THE SKIN
IN
CHILDREN.



A
PRACTICAL TREATISE
ON
DISEASES OF THE SKIN
IN
CHILDREN:

FROM THE FRENCH OF CAILLAULT.

SECOND EDITION.

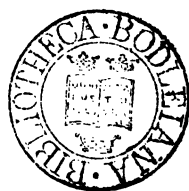
With Notes, Appendix, and Formulae,

BY
ROBERT HOWARTH BLAKE,
MEMBER OF THE ROYAL COLLEGE OF SURGEONS, LONDON.



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PREFACE TO SECOND EDITION.

IN introducing the second edition of this work to the notice of the Profession I have to express my sincere thanks to the medical press in general for the very favourable manner in which its predecessor was received. I have endeavoured to improve this edition, as far as practicable, by the addition of a complete Index and a copious Formulary. To the latter I have appended a few Therapeutical Notes, with some suggestions as to the best and most efficacious mode of using the various remedies employed, and as to the conditions and circumstances in which they should be prescribed. I am well aware that my opinions on several of these matters will be found to be at variance with those of many practitioners of eminence whose opinions are entitled to the greatest weight. I have simply recorded, with as much exactness as the nature of the subject admits of, the results of my own observations and experience in the extensive field afforded me in this town and neighbourhood. It would not have been within the limits of my design to have criticised the opinions of others, or even to have pointed out wherein they coincided or differed from my own. Most of the formulæ contained in the Appendix are original, and have been long employed by me in hospital and private practice. I should have added many other notes to the body of the work had it not been for the fear of extending it beyond moderate limits.

Leamington, November, 1863.

AUTHOR'S PREFACE.

THE functions of the skin are more rapidly and energetically modified by external and internal agents in childhood, owing to the great activity of vegetative life, than in the adult. Skin diseases are, therefore, more numerous, and occur more frequently, in infancy than at any other period.

It is for this reason that diseases affecting the whole organism are so frequently accompanied by symptomatic cutaneous eruptions.

The physiological and anatomical conditions may, to a certain extent, account for the extreme morbid sensibility of infancy.

The energy of all the functions of assimilation and organisation, evinced by the great vascularity of all the tissues, is greater the younger the child is.

It is chiefly during this period of growth, which characterises early infancy, that the skin plays so important a part; when, to repeat the expression of an illustrious nosologist, "the skin responds to the affections of the viscera, and participates, in some degree, in all their functions."

Another cause which contributes to increase the number of skin diseases in youth is the special aptitude to the

attack of contagions, which, whatever be their nature, act with an energy not to be observed at any subsequent period of life.

In investigating the chief physiological actions and the diseases peculiar to infancy we are disposed to accept the old division of that age into three periods.

The *first* commences at birth and ends after the first dentition. It lasts about thirty months, and it is during this period that the organic changes are so rapid, and that the mortality attains its maximum.

The *second* commences at the completion of the first dentition and terminates towards the end of the sixth or seventh year.

The *third* extends from the seventh year to the time of puberty. This period is characterised by permanent dentition and by the development of the sexual organs. The state of health approaches that of mature age, and the mortality descends to its minimum.

There exists in the child what may be called an apparent and a real age. A young subject may arrive at the age of fifteen or eighteen without exhibiting any of the phenomena characterising puberty, while another individual at the age of thirteen ought to be considered adolescent. The same may be said with respect to the first and second periods of infancy. In our opinion, for the purpose of appreciating the various ages medically, we must take into consideration the great physiological facts which serve as a basis to these established periods.

Before entering on our subject we will explain what object we had in view, and our motives in writing this work.

During the two years of our residence in the Hospital for Sick Children our attention was chiefly directed to skin diseases. Having since then continued this study, we have arrived at the conviction that this extensive class of diseases exhibits during infancy peculiarities sufficiently important to deserve a special description. We have, therefore, in this purely clinical work, collected, without historical considerations, and without pretensions to erudition, what we have seen and investigated in the cutaneous affections of childhood.

Though we should be on our guard against the natural tendency to exaggerate the importance of subjects to which our attention has been for a long time directed, we must, on the other hand, not try to diminish it.

We shall not merely treat of the diseases peculiar to infancy, but we shall carefully investigate those peculiarities in the affections which infancy has in common with adult age. For it is just these shades and dissimilarities which it is necessary to know, since they play such an important part in infantile affections that they alone constitute, in some degree, a pathology in the great class of skin diseases.

There is, moreover, a point of great interest which has hitherto been entirely neglected; viz., the study of skin diseases in relation to the evolution of the various ages. We have made it a point in the whole of this work to show the importance attaching to age in relation to the frequency, and even to the possibility, of different cutaneous affections.

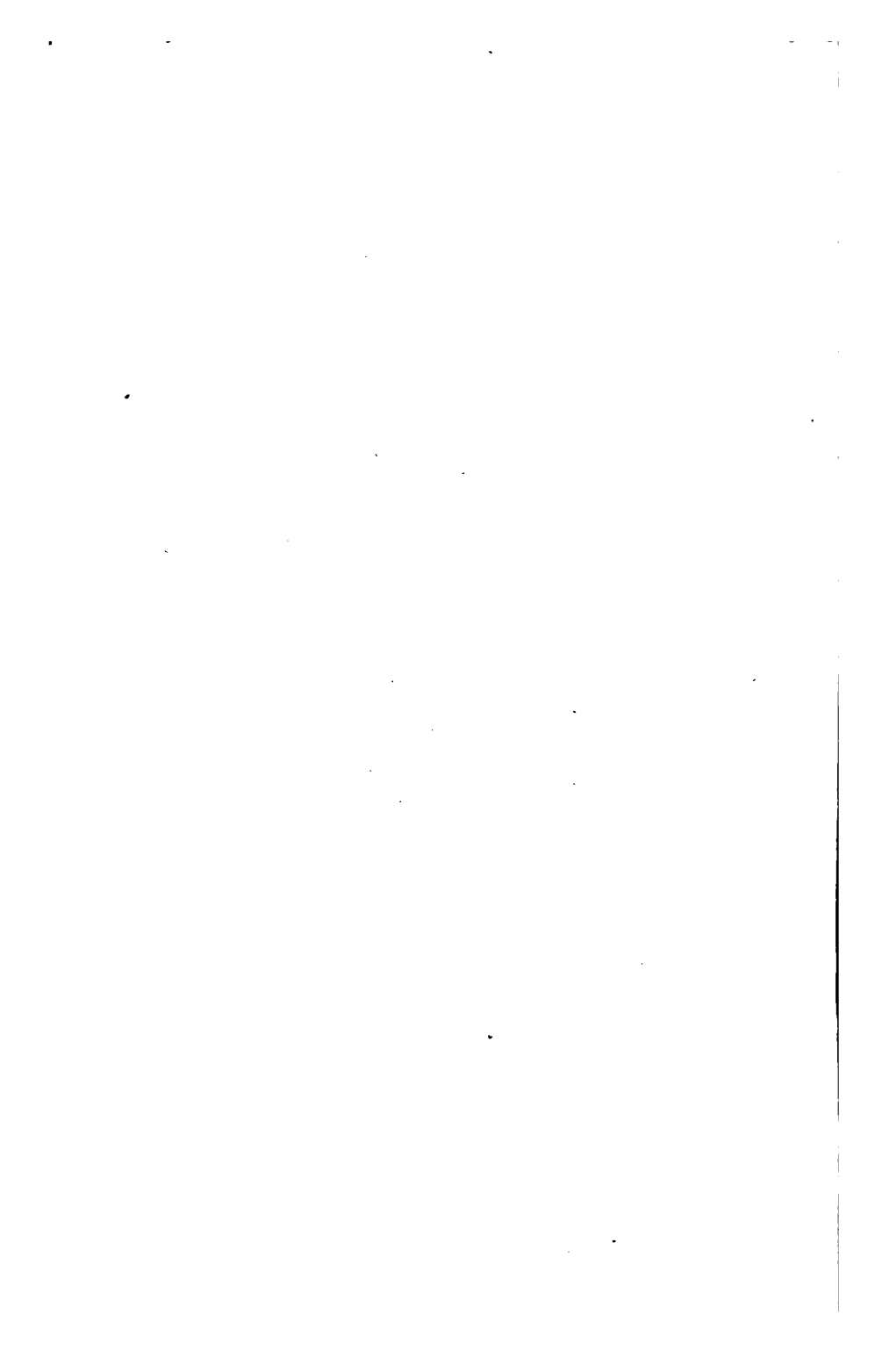


TABLE OF CONTENTS.

	PAGE
Translator's Preface	iii
Author's Preface	v
General observations	1

First Class.

SYPHILIS	4
Sect. 1.—Acquired Syphilis	5
Sect. 2.—Congenital Syphilis	7
Art. 1.—Mucous Patches	11
Art. 2.—Diagnosis of Syphilis	18
A.—Onychia	24
B.—Vegetations	26
C.—External Appearance	28
D.—Roseola. Erythema	31
E.—Pseudo-syphilis	34
Art. 3.—Treatment of Syphilis	40

Second Class.

STROPHULOUS DISEASES	45
Strophulus	46
TREATMENT OF STROPHULOUS DISEASES	48

Third Class.

	PAGE
LYMPHATIC DISEASES	50
Sect. 1.—Achor	51
Sect. 2.—Pernio—Chilblains	58
Sect. 3.—Molluscoid Acne	63
TREATMENT OF LYMPHATIC DISEASES	83
A.—Treatment of Achores	83
B.—Treatment of Chilblain	85
C.—Treatment of Molluscoid Acne	88

Fourth Class.

SCROFULOUS DISEASES	89
Sect. 1.—Cutaneous Tubercles	92
Sect. 2.—Subcutaneous Tubercles	94
Sect. 3.—Scrofulous Ulcers	95
Sect. 4.—Lupus	99
Sect. 5.—Impetigo	104
A.—Impetigo of the Scalp	106
B.—Impetigo of the Face	108
Scrofulous Ophthalmia	110
TREATMENT OF SCROFULOUS DISEASES	112
A.—Treatment of Lupus	114
B.—Treatment of Impetigo of the Scalp	117
C.—Treatment of Impetigo of the Face	118

Fifth Class.

DARTRES (TETTERS)	120
Sect. 1.—Prurigo	121
Sect. 2.—Lichen	124
Sect. 3.—Eczema	127
Eczema of the Scalp	129
Sect. 4.—Lepra	133
Sect. 5.—Psoriasis	135
Sect. 6.—Pityriasis	138
Sect. 7.—Ichthyosis	141

TABLE OF CONTENTS.

xi

PAGE

Sect. 8.—Tetters of the Mucous Membrane	144
TREATMENT OF TETTERS	145
A.—Treatment of Prurigo and Lichen	145
B.—Treatment of Eczema	146
C.—Treatment of Lepra and Psoriasis	148
D.—Treatment of Pityriasis	152
E.—Treatment of Ichthyosis	153

Sixth Class.

PARASITICAL DISEASES	154
VEGETABLE PARASITES	156
Sect. 1.—Favus	156
Sect. 2.—Herpes Tonsurans	160
Sect. 3.—Porrigo	163
ANIMAL PARASITES	166
Sect. 4.—Scabies—Itch	166
Sect. 5.—Pedicular Disease	170
TREATMENT OF PARASITICAL DISEASES	170
A.—Treatment of Favus	172
B.—Treatment of Herpes Tonsurans	173
C.—Treatment of Porrigo	174
D.—Treatment of Scabies	174

Seventh Class.

CUTANEOUS HÆMORRHAGIC DISEASES	176
Sect. 1.—Purpura	176
TREATMENT OF PURPURA	181

Eighth Class.

CACHECTIC CUTANEOUS DISEASES	182
Sect. 1.—Cachectic Pemphigus	184
Sect. 2.—Rupia	188
Sect. 3.—Cachectic Ecthyma	192
Sect. 4.—Phagedenic Gangrene	194
Sect. 5.—Cachectic Diphtheria	222

	PAGE
CACHECTIC CUTANEOUS DISEASES—(Continued)	
TREATMENT OF CACHECTIC CUTANEOUS DISEASES .	239
A.—Treatment of Rupia	239
B.—Treatment of Cachectic Ecthyma	240
C.—Treatment of Phagedenic Gangrene	240
D.—Treatment of Ultimate Diphtheria	242

Fifth Class.

INFLAMMATORY DISEASES	243
Sect. 1.—Acute Ecthyma	243
Sect. 2.—Simple Pemphigus	245
Sect. 3.—Herpes	250
1.—Phlyctenoid Herpes	250
Herpes Labialis	252
Herpes Præputialis	253
Herpes Vulvaris	254
2.—Zona	255
Sect. 4.—Erythema	258
Sect. 5.—Roseola	261
Sect. 6.—Urticaria	263
Sect. 7.—Erysipelas	266
TREATMENT OF INFLAMMATORY DISEASES	268
A.—Treatment of Simple Pemphigus	268
B.—Treatment of Herpes and Zona	269
C.—Treatment of Erythema	270
D.—Treatment of Roseola	271
E.—Treatment of Urticaria	271
F.—Treatment of Erysipelas	272
 CONCLUSION	 273

Appendix.

A Practical Treatise

ON

DISEASES OF THE SKIN IN CHILDREN.

GENERAL OBSERVATIONS.

WITHOUT attempting to propose a classification, we have grouped together the diseases of the skin as we have seen them appear at the bedside of patients, where, medically speaking, the nomenclature of WILLAN can only serve as an excellent means of analysis.

In our descriptions will be found some diseases affecting the mucous tissues; for it appeared to us to be advisable to describe together diseases which are so intimately connected by their diathetic symptoms, and which manifest themselves locally on the skin or mucous membrane.

In a few words we may say that our design in this treatise is—

1st.—To study the cutaneous diseases of infancy in their relation to age.

2nd.—To point out that skin diseases in children are, in most cases, symptoms of some constitutional affection.

We have thought proper to exclude from our consideration eruptive fevers, inasmuch as they are specific contagious maladies, quite distinct from diseases of the skin.

We have arranged these diseases of infancy in nine distinct groups, which embrace them all.

In the following table they are exhibited in the order in

which they succeed each other as age advances, and not in their order of frequency, every period of life having, so to say, its peculiar affections. Tracing the infant from its birth, we have followed it up to the period of puberty; and, commencing with the groups which chiefly appear during the first period of life, we have terminated with those affections which manifest themselves indiscriminately at all ages of infancy.

1st.—SYPHILIS	Mucous patch
	{ Strophulus
	" Intertinctus
	" Albidus
	" Candidus
2nd.—STROPHULOUS DISEASES	" Volaticus
	" Convertus
	Erythema
	Roseola
	Vesiculæ
	Pustulæ
3rd.—LYMPHATIC DISEASES	{ Achor
	Pernio
	Molluscoid acne
4th.—SCROFULOUS DISEASES	{ Cutaneous scrofula
	Lupus
	Impetigo
	{ Prurigo
	Lichen
	Eczema
5th.—DARTROUS DISEASES	Lepra
	Psoriasis
	Pityriasis
	Ichthyosis
	{ Favus
6th.—PARASITICAL DISEASES	Herpes tonsurans
	Porrigo
	Scabies
7th.—HÆMORRHAGIC DISEASES	Purpura
	{ Cachectic pemphigus
	Rupia
8th.—CACHECTIC DISEASES	Cachectic ecthyma
	Phagedenic gangrene
	Cachectic diphtheritis

9th.—INFLAMMATORY DISEASES .

{	Ecthyma
	Pemphigus
	Herpes
	Zona
	Erythema
	Roseola
	Urticaria
{	Erysipelas

These groups appear to us to represent faithfully the results of observation from a nosological point of view. We should, however, add, that the nomenclature and composition of these groups do not express that this or that cutaneous disease may not exist in some other diathesis as well as in that from which the group derives its name. Thus we see, for instance, impetigo classed among scrofulous affections, which simply means that it is most frequently one of the manifestations of scrofula. Eczema, again, is placed among dartrous affections; and yet it sometimes happens that we meet with eczema in scrofulous, and with impetigo in dartrous subjects.

The fact is that no classification can pretend to be strictly accurate without being so extended as to become confused. On inspecting the foregoing table, it will be seen that some cutaneous affections recur in it.

This apparent confusion expresses, as we think, a clinical truth.

It frequently happens that this or that lesion may be proved to be an elementary form serving to characterise cutaneous affections which are quite distinct in their origin and progress, as well as in the treatment they require.

Notwithstanding the greater or lesser similarity of these lesions, it is difficult to classify these diseases without abstracting their general characters and subordinating them, as WILLAN has done, to anatomico-pathological notions.

FIRST CLASS.—SYPHILIS.

THE characters which syphilis presents in infancy bear so little resemblance to those manifested by it in adult age, that, notwithstanding all the works written on the subject, it is still one of those infantile diseases which offers the greatest difficulties and the greatest number of obscure points for elucidation. Its origin and symptoms are not the same as in the adult—they differ in their number and course, in their aspect and their prognosis. It would, therefore, be a grave error to apply the results of observations made in the adult to this particular branch of pathology, especially as regards new-born children.

In mature age the evolutions of syphilis are more or less strictly regular, while in early infancy the primary symptoms are either imperceptible or absent; the secondary symptoms constitute, in fact, the whole disease, and the so-called tertiary phenomena never occur. Lastly, we may state that in certain conditions of the organism a variety of lesions appear in the child, to which collectively the name of pseudo-syphilis may be given.

Most authors have designated these affections indifferently by the words hereditary syphilis, congenital syphilis, syphilis by generation, infantile syphilis, syphilis of new-born children. These expressions are not, however, synonymous in the minds of authors. We shall, therefore, following the example of DIDAY, employ the terms *congenital* and *acquired* syphilis.

This natural division comprises, in truth, every form of infantile syphilis. We shall treat but briefly of the second

of these forms, as it presents but few distinctive peculiarities, and consequently has less interest both on account of its rarity as well as of its resemblance to syphilis in the adult.

SECTION I.—ACQUIRED SYPHILIS.

We understand by acquired syphilis in new-born children every form of the disease which enters the organism in any way after the birth of the child.

The delicacy of the skin, as well as the constant handling necessitated by the care which infants require, should prepare us for the frequent occurrences of syphilis by contact. This mode of origin was formerly generally accepted, so that chancres having their seat in the genitals of the mother were considered as being frequently the cause of acquired syphilis in the new-born child, which became thus infected during its passage through the maternal parts. This theoretical assertion was nothing but a presumption, for it is very difficult to discover in the numerous observations on syphilis any well-authenticated facts establishing such a mode of transmission. There can be no doubt that blennorrhagic affections furnished the principal data in support of this belief.

We nowhere find any well attested proof of the existence of a primary chancre in the child contracted during its birth. The conditions, moreover, which attend delivery seem to afford sufficient protection against such a contamination.

Acquired syphilis may be produced accidentally by the transference of the virus adhering to the fingers of nurses, or in the following mode as stated by Professor TROUSSEAU. There was a female in the Necker Hospital suffering from blennorrhagia and chancres in the vulva. She made her baby sleep with her, and the consequence was that the buttocks of the former came in contact with the pubes of the latter, the hair of which was impregnated with the syphilitic poison. After a certain time the learned professor perceived

upon one of the buttocks of the child a real Hunterian chancre, resembling in every respect that of the adult. Nor are there instances wanting of nurses who are so depraved as to appease the cries of children by the aid of lascivious manipulations, and who thus transfer the syphilitic virus from their hands to the genitals of their nurslings.

But the most frequent cause, and that which raises the greatest difficulties, is without doubt direct infection from the breasts of nurses. This question involves, in fact, the complex subject of the contagion of syphilitic symptoms, of which we shall have to treat under the head of congenital syphilis. We admit, with the greater number of authors, that the child sometimes contracts the disease from specific lesions developed on the nipple of the nurse; but here the differences of opinion commence as to the interpretations of the facts. It is not within the scope of our subject to develop all the theoretical points raised by the fact of these transmissions. We shall confine ourselves to the study of the cutaneous manifestation of these two varieties of syphilis in the infant.

In our experience a primary chancre during the first period of life is a true exception. When by chance it does exist, the physician may then trace the usual sequence of events including the development of secondary symptoms, and may observe the disease develop itself as in the adult. In these rare cases acquired syphilis presents many intimate analogies with that of mature age. But when the babe contracts from its nurse transmissible secondary affections (mucous patches), they exhibit all the characters of congenital syphilis. Hence it naturally follows that we shall only describe in detail the cutaneous phenomena of congenital syphilis, *which in point of fact constitute the whole disease in infants*. Before leaving the subject of acquired syphilis, we must mention that, during the second period of infancy and that of adolescence, it runs

its course as in the adult, the evolution of its symptoms being neither retarded nor accelerated.

SECTION II.—CONGENITAL SYPHILIS.

This form of syphilis is remarkable in more than one respect; for example, it originates without inoculation, and the secondary affections which mark its appearance are really primary.

The transmission of congenital syphilis from the parent to the foetus during intra-uterine life is a mysterious physiological problem. It is generally believed that the child may be infected by the mother in two ways: either by her contamination before conception, or by her contracting the disease during pregnancy. Many authors think, with RICORD, that the infection of the foetus is not possible if the mother contracts the disease after the sixth month of her pregnancy. This opinion is no longer tenable, CULLERIER having by numerous cases proved that hereditary transmission may take place at any period of pregnancy and at all stages of infection in the mother. The transmission of the disease from the father is equally proved, but the possibility of this transmission appears to be limited, according to the researches of DEVILLE, to the period prior to the appearance of tertiary symptoms.

All authors on this subject agree that the infection of the foetus is inevitable if both parents are affected at the time of conception; but this is far from being the case when one of the parents only is diseased. The infant, moreover, inherits features, mental qualities, morbid predispositions, and certain diseases from its parents. As regards the maternal or paternal predominance in these transmissions, physiology is yet in the dark; and it is by no means repugnant to the facts of that science to admit that the offspring of a syphilitic mother, conceived even during the characteristic manifesta-

tions of that disease, may be born with the health and predispositions of a father who has not been affected by it, and *vice versa*. In these latter cases, which are much the most numerous, congenital syphilis follows the ordinary laws of transmission of hereditary diseases, such as scrofula, insanity, &c., in which it often happens that among many children some only suffer from their unhealthy origin, whilst the others escape the unfortunate hereditary taint and bring with them into the world the health of the sound stock.

LEGENDRE gives in his thesis entitled *New Researches on Syphilides* (1841), the following results of his investigations:

"Among sixty-three patients whom I had under my care, there were fourteen who had sixty children born to them in the period which elapsed between the disappearance of primary symptoms and the development of venereal eruptions; thirty-five of these children died without the appearance of any eruption; the period of death ascertained in these children gave seven years as a mean, the extremes being two years and twenty-two years respectively. I took care to note the mean age at which death occurred; for although NISBETH, DOUBLET, and BERTIN maintain that venereal symptoms may appear from the eighth to the tenth day after birth, DOUBLET has also stated that symptoms of infection sometimes did not appear until the end of eight months, and he even asks whether this germ may not take a longer time to develop itself, and also whether it may not be the source of scrofulous affections—a question which had been previously raised by ASTRUC. It was important to note at what period the children died; for if the event had occurred three or four days after birth, it might have been said that they had not lived long enough for the symptoms of constitutional syphilis to appear."

"With regard to the thirty-three children who lived, they enjoyed good health; and attained a mean age of seventeen

years; the extremes being one year and thirty-eight years. All our results being similar, we must admit that the health of the child scarcely ever acquires any unfavourable tendency from the latent state of syphilis existing in the father at the period of the birth of his offspring. I may also mention, that out of twenty-four women married to individuals who were afterwards affected with syphilis, not one was either affected with the slightest eruption or with the least indication of constitutional infection during the latent condition of the disease in her husband."

The annals of science contain numerous cases of successive miscarriages without any external violence, which ceased altogether after a specific treatment of the infected parent.

These facts, which are generally undisputed, clearly establish that congenital syphilis is one of the causes of the death and premature expulsion of the foetus. They should also *à priori* show that the foetus, which is so often destroyed within the womb, might, either by a greater amount of resistance or a lesser degree of infection, reach the usual period of delivery, and exhibit marks of syphilis at birth. These cases are, however, very rare, and the reality of the small number which have been published has been denied by RICORD, who is of opinion that the facts have been badly observed, and that the supposed syphilitic spots were merely signs of the commencing decomposition of the cuticle.* It is certain that most syphilitic children who escape the danger of intra-uterine death are born without any external

* Notwithstanding the opinion of RICORD there can be no doubt that such cases do occasionally occur. One well-marked example is sufficient to set this question at rest; and we think no exception can be taken to the following case which was observed by BOUCHUT:

A syphilitic mother gave birth to a child at the seventh month. In addition to mucous patches, it had red, brownish, and copper-coloured pustules on the legs and arms; the vulva was swollen, the nymphæ ulcerated and smeared with muco-purulent matter, and onychia existed on all the fingers and toes.—BOUCHUT: *Traité pratique*, p. 859. Deuxième édition.—(Ed.)

marks of the disease, the characteristic symptoms appearing after an interval of a month or six weeks.

Most authors agree in the statement that, excluding exceptional cases, congenital syphilis rarely appears before the second week after birth, and scarcely ever later than the seventh month.*

When we study with accuracy all the so-called symptoms of infantile syphilis, which were formerly so numerous, we are struck by the small number of real manifestations of this disease.

We consider congenital syphilis to be altogether cutaneous. It is exclusively confined to the skin; and if it be true that it kills a large number of children, it is owing to the frightful rapidity with which they fall into the cachexia called syphilitic, which is so rapidly fatal.

If no anti-syphilitic treatment be adopted, we find the phenomena in most cases succeed each other in the following manner.

The collective phenomena to which we give the name of mucous patches—an exclusive manifestation of congenital syphilis—make their appearance accompanied or followed by coryza, otorrhoea, &c. Soon afterwards, according to the good or bad hygienic conditions, the infants languish, become more or less rapidly discoloured and emaciated, and at the same time diarrhoea supervenes.

This condition sometimes lasts for a time before the appearance of cachexia, but it shows itself the sooner, the younger the infants are.

Then various eruptions supervene, such as pustules, papulæ, erythema, ecthyma, &c., &c.

At the same time diarrhoea increases, the extremities

* Out of 158 cases of infantile syphilis collected by DIDAY from various authors, no less than 146 manifested the first symptoms of the disease before the end of the third month.—(ED.)

become infiltrated, the discolouration of the skin and the mucous membranes becomes more evident, the strength and the appetite disappear, auscultation of the chest enables us to detect ronchi more or less abundant, and death supervenes in a state of marasmus by the aggravation of one of these last phenomena.

We shall in the sequel endeavour to show that this termination and the greater number of the latter symptoms which we have just enumerated are by no means the necessary consequences of syphilis, but rather of the cachectic state of the little patient.

ARTICLE I.—MUCOUS PATCHES.

The mucous patch* is the true pathognomonic symptom of congenital syphilis; of which it constitutes the whole external manifestation†. This assertion differs considerably from all that has for a long time been written on this subject, and I am not aware that it has ever been so clearly expressed. It is for this reason that I appeal, not to the experience of practitioners, but rather to their ultimate judgment, after a close examination of the so-called syphilitic symptoms in suspected infants.

Congenital syphilis most frequently commences around

* The mucous patch has been described under the following names: mucous tubercle, syphilitic tubercle, flat tubercle, flat pustule, syphilitic patch, humid papular syphilide, condyloma.

The name adopted by our author, though very objectionable, is on the whole the best.

The mucous patch is neither tubercular, pustular, nor papular. It is most important that it should not be confounded with any of the tubercular syphilides, all of which are tertiary and non-contagious, whilst the mucous patch is secondary and contagious.

When the mucous patches become more prominent and consistent they are often called condylomata; but this term is also abusively applied to other morbid conditions of a different nature, such as hypertrophied papillæ, &c—(Ed.)

† We must not be understood as wishing to depreciate the value of Dr. GUBLER'S observations on disease of the liver in new-born syphilitic infants. We have never met with it; the facts are, moreover, beside our subject.

the lips or the anus, by fissures and cracks, more or less deep, similar to the ordinary fissures which affect these parts. These little elevations are generally only the first phases of mucous patches, which soon exhibit all their usual characters. Should, however, the fissures persist, they cause serious obstacles to the action of the lips and anus by their number and by the pain which they produce. The fissures of the lips become an impediment to suction which is already obstructed by syphilitic coryza, of which we shall speak in the sequel. The anal fissures are a chief cause of tenesmus, which is frequently only the prelude to formidable intestinal affections. Thus the death of a newborn infant is sometimes quickly caused before the syphilitic affection has run through its principal phases, from the rapid supervention of marasmus caused by secondary lesions, which could not be promptly remedied.

Mucous patches may appear on any part of the body of the infant; whilst, on the contrary, in the adult they are confined to the mucous tissues and to those parts where the skin is delicate and exposed to friction. This general diffusion of the disease in infancy seems to be dependent on the anatomical conditions peculiar to that period of life.

Mucous patches may even appear upon the surface of a chancre, which thus becomes transformed, as has been observed by RICORD. It would be erroneous to assume that this kind of mutation *in situ* occurs frequently. The fact is, however, valuable as indicating accuracy of observation, and as giving an account of a possible truth; but inasmuch as it gives great support to certain theoretical ideas, we must not invest it with more than its real importance. We should, moreover, bear in mind the rarity of a chancre in the infant.

We ought to study mucous patches both upon the skin and the mucous membranes, because they present some

differences in the two tissues which render the diagnosis somewhat doubtful. Upon the skin the mucous patch presents a papular prominence of variable size, irregularly rounded, frequently deprived of its epidermis—moist, red, or even white and covered by a plastic secretion, which is more or less easily removed by friction. As the congestion increases, the surface becomes elevated in the form of a large prominent papula, which is soft, and bordered by an areola of a violet colour, and exhales a fetid odour *sui generis*. If the mucous patches appear upon places where the skin is very thin and subject to friction, as upon the scrotum or the inside of the thighs, they ulcerate, and several of them uniting together may form a patch of large size.

Some heal accidentally in different ways, being converted into excrescences of various shapes, such as cock's combs, vegetations, &c.*

Upon the mucous membranes these syphilitic patches appear more regularly rounded, not elevated, and frequently even somewhat depressed. They are covered with a white, pseudo-membranous exudation, on the removal of which a red ulcer is seen, with a more or less abundant fetid secretion. They appear chiefly in the mouth and the nasal fossæ, where they produce the group of symptoms called syphilitic coryza. It even frequently happens that the first manifestation of syphilis in the child consists of mucous patches inaccessible to sight in the nasal fossæ. Hence, many authors consider coryza as the first symptom of congenital syphilis. The appearance of mucous patches in the nasal fossæ, or in other words of syphilitic coryza,† is

* The excrescences referred to in the text should not be confounded with others similar in appearance but very different in their nature which are occasionally met with in infants, and which are non-syphilitic. The true syphilitic vegetation in infants is, we think, invariably a transformation of a mucous patch.—(ED.)

† There is no proof whatever that syphilitic coryza is constantly or even generally dependent on the presence of mucous patches in the nasal fossæ:

an important matter in new-born infants: this serious complication manifests itself by a slight obstruction in the nose, somewhat impeding suction. This symptomatic coryza differs from a simple catarrh in intensity and duration; as the disorder progresses, lactation is seriously impeded; and a thin mucus, which soon becomes bloody, escapes from the nose. Unless therapeutic means are interposed the disease increases, mucous patches appear on the back of the throat, and laryngitis, which at this age is always serious, supervenes and manifests in the voice and cough, the symptoms which are met with in the adult in analogous cases.

Most authors maintain that in syphilitic coryza, caries of the nasal bones, and a complete destruction of the vomer and cartilages, occur after a certain time. They also assert that these destructions are effected much more rapidly than in the adult.

We cannot refute statements which certainly have been established by sufficient proofs in the opinion of the observers who have enunciated them; but we may be permitted to point out that such a series of events in infantile syphilis would be in contradiction with what may be daily observed.

It is very true that in the adult, syphilitic affections of the bones are frequently seen, and that the bones of the nose as well as other parts of the skeleton are invaded by it. But does not this occur in the advanced period of this protracted disease, whilst according to most authors coryza is in the infant almost the first symptom? The osseous system is not concerned in infantile syphilis, and we scarcely find it referred to in the long list of the so-called syphilitic symptoms attributed to infants. Moreover, we know that mucous patches are, contrary to what occurs in the adult, multiplied to such an extent that they may some-

there is quite as much evidence in favour of its vesicular or pustular origin; but, in truth, the exact nature of this affection has yet to be discovered.—(ED.)

times be as numerous as the pustules of discrete varioloid. We know how easily they are developed upon a thin and vascular integument. The probabilities are, that it is with these important lesions of the nasal bones and cartilages as with so many others which have formerly been ascribed to infantile syphilis, as if at the pleasure of the observer. It is possible that in certain autopsies of children, who are cachectic from the existence of the syphilitic diathesis, the bones and cartilages have been found blackened, denuded, and left exposed, by ulceration of a phagedenic nature. But these facts are possible and can be explained without any syphilitic taint. Moreover, symptomatic otorrhœa has been observed numbers of times to be owing to the presence of mucous patches in the external auditory canal. Does not this to some extent demonstrate what generally occurs in the anfractuositities of the nasal fossæ? Some authors (ROSEN, COLLES) have noted the hoarse voice of syphilitic infants. DIDAY, comparing this fact with the frequent development of mucous patches in the mouth and on the adjacent portion of the pharynx, seems inclined to admit the existence of a simple erythema in the vicinity of the aryteno-epiglottidean ligaments.

The diagnosis of mucous patches may present some difficulties when they are situated in the mouth, where it is often by no means easy to form an accurate opinion as to their nature. They generally consist, as we have said in describing their characters in the mucous membranes, of a rounded ulcer of a white colour, with a caseous diphtheritic exudation, which becomes of a vermillion colour when their cure is complete. These characters resemble those we have formerly described in speaking of the variety of aphthous diseases in infants; they are usually discrete, occur in an acute form, and are characterised by ulcers which may show themselves in every part of the buccal mucous membrane.

Only these ulcers are frequently deep, oval, with perpendicular edges, and were it not for their smaller dimensions, they might be compared to Hunterian chancres. But the distinctive and important character is the presence of a white, pellicular layer, which covers the patches during nearly the whole time of their continuance, whilst in the acute aphthous disease of new-born infants the caseous exudation is merely accidental and transitory. Nevertheless, we must bear in mind with what facility buccal phagedenic ulcerations are covered with a white exudation, more or less plastic, and membranous in appearance. It is sufficient to be acquainted with these difficulties to induce us to have recourse to all those means which a strict investigation enables us to apply, in order to furnish the elements of a correct diagnosis. Mucous patches generally persist longer, and are more easily produced upon those parts of the tegumentary system where some cause of irritation exists, such as friction, or a prolonged imbibition of any kind of fluid, &c. They are sometimes so numerous upon the whole surface of the body, that they resemble an eruption of large papulæ in the adult.

Their colour is not always the same; the health of the infant usually determines the various tints; the coppery tint is nearly always absent. Most authors speak of a violet colour, which might in some sort have the same value as this characteristic colour in the adult. But we know how easily the violet tint is produced in all infantile cutaneous eruptions, especially in the period of decline and according to the more or less languid state of the economy. The prognosis of mucous patches is not necessarily serious; it only becomes so when no suitable treatment is promptly adopted. Still it frequently happens that under unfavourable hygienic conditions the infant sinks rapidly into a state of fatal marasmus. Then the symptoms increase in severity, the patches become more numerous, are deprived of their epidermis,

and furnish a serous exudation more or less abundant. The discharge from the nasal fossæ becomes more fetid and sanious; anal ulcers appear, and become gradually deeper; the infant wastes rapidly; and sinks into a true cachectic condition, in which the extremities become infiltrated and the diarrhoea unmanageable; and death supervenes when râles, more or less abundant, are heard in the chest.

One of the most important questions connected with hereditary syphilis is, without doubt, that of the contagious nature of the mucous patch which, in our opinion, is the sole manifestation of infantile syphilis. We know how much the possibility of contagion in the adult from this source is still disputed. The opinion which denies syphilitic transmission by the mucous patch is founded upon the formal assertions of inoculators (HUNTER, RICORD). This belief prevailed exclusively for a long period; nevertheless, from time to time, certain isolated facts, occurring especially to country practitioners, seemed to contradict it; but for many years these theoretic assertions became less positive, and very numerous facts have demonstrated the possibility of contagion. At length, inoculation was appealed to for the purpose of elucidating this important question. Experimentalists of great reputation have clearly demonstrated the contagious nature of secondary symptoms (WALLACE, WALLER, BOULEY). These facts rendered the possible contagion of congenital syphilis *à fortiori* more evident; so that DIDAY considers it contagious in the highest degree. Without going so far, we may admit that the mucous patch of the infant is communicable to the nurse, and of the latter to her nursling. But this contagion is far from being necessary or of constant occurrence, since so eminent a practitioner as CULLERIER denied it until within the last few years; and our learned master, Professor NATALIS GUILLOT, is still in doubt with regard to this important scientific question.

It must be mentioned that the possibility of this contagion is still, and will remain for a long time, a disputed question among physicians. For our parts, after having studied this subject without any preconceived opinion, we are compelled to admit the contagious nature of the mucous patch, but we cannot conceal from ourselves the great difficulties surrounding questions of this kind, and that it is nearly impossible to furnish absolute proofs of it. It is evident that in such a matter the best observed facts always present some gap whence a doubt arises.

These circumstances, peculiar in some degree to syphilis, ought to make us very cautious, especially as we are convinced that numbers of reputed cases of congenital syphilis are in reality cases of infantile cachexia, free from any specific virus.*

ARTICLE II.—DIAGNOSIS OF SYPHILIS.

The diagnosis of congenital syphilis is frequently obscure and difficult. These difficulties are in some cases insurmountable on the first examination of the patient. We must then study the subsequent progress of the disease to enable us to form an accurate judgment as to the cause. If, as too often happens, we rest satisfied with the simple appearance of one or several lesions more or less similar in colour to those observed in syphilis of the adult, errors are inevitable. We have many times witnessed the spontaneous recovery of children reputed to be syphilitic upon the authority of a more or less coppery tint, or upon that of a more or less suspicious eruption, and have hence been led to investigate more closely the difficulties in the diagnosis of congenital syphilis.

* We cannot agree with the author in the opinion that the mucous patch is the sole indication of infantile syphilis, but we entirely concur with him in thinking that many cases of cutaneous affections complicated with cachexia are erroneously considered and treated as of syphilitic origin; on the other hand, we believe that numerous cases similar in appearance to those just mentioned, and in which no mucous patches are perceptible, are really syphilitic. We shall refer to the diagnosis of these cases in a subsequent note.—(ED.)

The study of clinical facts and of the writings of various authors has convinced us that, beside congenital syphilis, there is a disease which we intended to describe under the name of pseudo-syphilis. But finding on reflection that by this term, for the use of which, in a certain point of view, a good reason can be assigned, we should merely designate facts which nosologically pertain to infantile cachexia, we have abstained from doing so. In point of fact, the term pseudo-syphilis would only have represented an apparent and not a real disease. Thus, if a plant called *cicuta* exists, there does not exist any to which the term pseudo-cicuta can properly be applied, but rather certain species which resemble the former, whilst they possess characters peculiar to themselves.

The importance of the facts advanced in this chapter obliges us at the outset to state clearly what we intend to prove.

A number of cutaneous lesions are met with in the infant, supervening on a more or less advanced state of cachexia, which are continually ascribed to syphilis. To the whole of these lesions, which sometimes group themselves in such a manner as to mislead us in our diagnosis, we give the name of pseudo-syphilis. The truth of this opinion has been abundantly demonstrated to us by the study of facts of the nature just referred to, in patients during the second period of infancy (from two to seven years), when syphilis, as is well known, is rarely the cause of them; and subsequently by meeting with identical facts in the new-born. The presence of the same cutaneous lesions in the new-born, which during the second period of infancy might sometimes lead us to believe in the existence of syphilis, renders it important for us to search for the origin of these various lesions in the former.

We have many times found it quite true, as stated by

MAHON, that syphilis in the infant spares most of the tissues and chiefly attacks the skin and the mucous membranes. But we have also found that it is not the less true that syphilis is not singular in this predilection.

For a complete demonstration of this assertion, we must refer the reader to the chapter on cachectic cutaneous diseases. With the view of saving space, we shall only quote here a few facts derived from our own observations, which will be compared with some cases of supposed syphilis in the new-born taken from authors who are considered as authorities in these matters. It will be easy to judge by this comparison what resemblance exists between that which we term pseudo-syphilis, and what has often been described as appertaining to congenital syphilis.

We should add, that this mode of looking upon the facts by no means disproves the existence of syphilis in new-born infants, but it greatly circumscribes its extent. One of our most esteemed masters, Professor NATALIS GUILLOT, views it nearly in the same light; limiting congenital syphilis, in his lectures, exclusively to the mucous patch.

The dominant fact in the history of these syphilitic phenomena, is that they only appear in children who are in an impoverished and cachectic condition. Consequently they are rarely observed except among children who are deprived of the necessary care during the first period of existence. It follows naturally from what has been said that they are chiefly to be met with in hospitals or among the indigent classes in large towns. Great poverty prevails, no doubt, also in the country districts; but the mothers, who are generally healthy and vigorous, suckle their babes themselves; whilst in populous parts, the infants are most frequently either committed to the care of strangers, brought up by the hand, or suckled by mothers whose occupations keep them a long time from their nurslings. These facts are so true, that

lesions simulating syphilis are only in exceptional instances found among the children of the wealthy.

On examining the chief features of congenital syphilis, we are struck by its marked difference from that in the adult. In the latter, the symptoms depending on this diathesis are as numerous as they are well established; in the child, on the contrary, the pathological phenomena resulting from syphilis are rare and uncertain. The erroneous assertions admitted into our science appear to result from the constant comparison between syphilis in the adult and in the new-born child. Most authors seem desirous of filling up the list of pathological phenomena in the latter as they naturally exist in the syphilitic adult. Hence special treatises on this subject are full of cases in which some authors ascribe a pathognomonic value to a certain form of eruption, and others to this or that lesion; every author seeming to search for a new symptom characteristic of congenital syphilis. There is in this natural tendency a sort of reaction against the opposite mode of observing facts, adopted by authors towards the end of the last and the beginning of the present century. MAHON, BERTIN, CULLERIER, &c., have, from a more exact observation than that of their predecessors, limited the number of the syphilitic phenomena of new-born children. Notwithstanding these limitations, however, they still refer to syphilis, certain symptoms which are now better known, and are quite independent of it. Nevertheless, they have banished many great and generally admitted errors, but they still think that syphilis during childhood may be detected by the most various and insignificant symptoms.

Thus we read in BERTIN: * "The skin is primarily affected by a great variety of pustules, excrescences, vegetations, ulcers, and vesicles. The lymphatic system and the glands

* *Traité de la Maladie Vénérienne chez les nouveau-nés.*

are the seat of obstructions, tumours, and buboes, produced immediately or mediately. The osseous system, from which I shall not separate the periosteum, though physiology and anatomy would permit such a distinction—the osseous system, I say, presents periostoses, exostoses, and caries. The two latter affections are, however, very rare. As to changes produced by the syphilitic virus in the viscera, post-mortem examinations have not disclosed any which we could exclusively attribute to it.”

“I have not observed that infants confided to our care during the period of lactation have presented, more frequently than those who were exempt from infection, the internal organic lesions, which, as it appears to me, have too often been considered as the effects of syphilis in the adult; such as fungus, tubercles, induration of some of the cerebral membranes, polypous concretion of the ventricles, hydatids of the choroid plexus, tubercles, hepatisation, carnification, and ulcers in the lungs, and even the vegetations, which CORVISART has formerly pointed out to us upon the hearts of many subjects, and which were attributed to venereal affections under which they had laboured.”

The pathological phenomena simulating infantile syphilis ought to be divided into two great classes. The first comprises different lesions of special character affecting the cutaneous and mucous tissues. The second is characterised by a well marked general cachectic condition, which we shall at present merely indicate. (*See Cutaneous Cachectic Diseases.*)

We can readily comprehend how liable we are to err in our diagnosis when these two series of symptoms are conjoined in the patient, which is frequently the case; and how apt we are to assume the existence of syphilis, especially when we find what is generally described as the principal sign of this

disease, viz., ulcerous lesions, which seem to be the sad privilege of infantile cachexia. Children at the breast are frequently brought to the hospital pale, shrivelled, wrinkled, almost moribund, and affected with asthenic ulcers, round in shape, with perpendicular edges. These ulcers are chiefly seated in the neighbourhood of the genital organs, from the anus to the labial commissures, at the base of the nose, in the mouth, &c. In most cases there exist, at the same time, either lichenoid eruptions more or less generally diffused, or impetiginous affections of the scalp, with whitlows, sub-cutaneous ecchymoses, &c. When such a series of symptoms occur, most physicians will either admit or at least suspect the existence of syphilis. And it is a remarkable fact, and one on which we must strongly insist, that it may happen that if the vitality of these cachectic children is not too much lowered, a favourable change in their hygienic conditions and a good diet, followed or not by the administration of *baths of bichloride of mercury*, will restore their health. It is very rare that, even among practitioners who are the least disposed to believe in the existence of syphilis in new-born children, on slight grounds, this cachexia is not indisputably admitted, according to the aphorism of HIPPOCRATES,* since the treatment to some extent confirms the diagnosis. We have a conviction which we believe to be well founded, and which we wish we could make others share with us, that this concurrence of symptoms may exist without the least venereal taint. This, as we have already stated, is the main point of the question: *Cachexias, whatever be their nature, chiefly attack the skin and the mucous membranes, and with greater energy and variety than congenital syphilis.*†

* "Curationes morborum naturam ostendunt."—(E.P.)

† We cannot specify within the limits of a note, all the points of difference whereby the syphilitic may be distinguished from the cachectic cutaneous affections of infancy. But excluding from our consideration those cases in

We will now give a description of the principal lesions, which contribute to make us believe in the existence of congenital syphilis. We refer to the chapter on cachectic diseases for the more remarkable symptoms of cachexias, some of which furnish certain authors with the least doubtful signs of infantile syphilis. (*See Pemphigus and Phagedenic Gangrene, under the head of Cachectic Diseases.*)

A.—ONYCHIA.—In studying the authors who have described certain affections under the name of onychia, &c., we perceive that considerable confusion exists, which it is very easy to verify, if this study be followed up by observing these affections in new-born children.

It is proved that in the adult there exist several species of onychia. One species, properly termed *dartrous*, is the result of an eczematous or scaly cutaneous affection, which more or less involves the matrices of the nails.

A second species, termed *scrofulous*, depends upon scrofulous ulcers, which are generally prevented from healing by disease of the bones of the ungual phalanges.

which mucous patches are present, as to the nature of which no doubt can arise, we may briefly state these differences as follows:

SYPHILITIC CUTANEOUS AFFECTIONS.

- (1) Almost always show themselves within three months from birth.
- (2) Generally occur somewhat suddenly, whilst the child appears to be in good health, or are preceded by languor and slight febrile disturbance.
- (3) Generally preceded and accompanied by coryza and hoarse voice.
- (4) The cachexia *follows* the eruption.
- (5) The eruption very frequently presents several elementary forms.
- (6) The eruption has a tendency to assume a coppery red colour, which is sometimes very decided and characteristic.
- (7) The skin acquires a peculiar yellow colour, and has a waxen appearance.

CACHECTIC CUTANEOUS AFFECTIONS.

- (1) May appear at any period of infantile life.
- (2) Generally preceded by some disease, often of considerable duration.
- (3) Not preceded or accompanied by coryza or hoarseness.
- (4) The cachexia *precedes* the eruption.
- (5) The eruption seldom presents more than one elementary form.
- (6) The eruption has a tendency to acquire a violet colour.
- (7) The skin becomes extremely pallid, and the sub-cutaneous tissues oedematous.—(Ed.)

A third species is called syphilitic, under which name two very distinct affections are comprehended. First, a true onychia, really syphilitic, seldom to be met with, which manifests itself by a special alteration of the nails, which become yellow and singularly thickened; secondly, an alteration in the nails which is also called syphilitic onychia, as it results from a cutaneous lesion, most frequently pustular and of syphilitic origin. The matrices of the nails are affected in the same manner as in the dartrous form. Syphilitic *onychia* has been considered as pretty frequent in new-born children, a fact which can only be explained by the desire of finding the same syphilitic symptoms in the infant as in the adult. But all practitioners in the habit of attending hospitals for children know how common whitlows are in chronic diseases.

The older the child is, the more this slight affection resembles those common cases which occur in a healthy adult. But in the new-born child, the nails appear somewhat raised by pus, which is seen to issue from between the root of the nail and the skin. The nail sometimes falls off, and leaves greyish ulcers surrounded by inflamed borders. In very cachectic children all the fingers are thus affected, and the nails are the more deformed and raised the younger the children are.

In children of a more advanced age and whose constitution is very much affected the whitlows become genuine centres of suppuration of an unhealthy kind, leaving pale sores very slow in healing and very difficult to cure. Sometimes these lesions become the starting-points of subsequent phagedenic ulcerations which seem to be peculiar to infantile cachexia, as in the following case borrowed from LÉLUT, who compares it to senile gangrene. "I saw," he observes, "at the Foundling Hospital, in 1825, a very remarkable case resembling senile gangrene, in a child but

a few days old, who was suffering from aphthæ. The parts surrounding the roots of the nails of the little finger of the right hand, and of the ring and little fingers of the left hand, suppurated; the inflammation extended, and, gangrene having seized the terminal phalanges of each of these fingers, they fell off spontaneously, without any hæmorrhage: the three wounds cicatrised—the child died. No lesion was found in the vascular system which could account for the rapidity of the gangrene."

All the cases of so-called syphilitic onychia which we have read of as pertaining to infantile syphilis, as well as all those which we have seen, appear to us to belong to cachectic onychia; or at least this lesion, which is frequently multiple, is always observed in sickly children under unhealthy hygienic conditions, and it never seems to be allied to syphilis. It would be erroneous to maintain that onychia is never produced under the influence of the syphilitic cachexia, but it would not be less inaccurate to consider this lesion as the sign of infantile syphilis. *ASTRUC* was one of the first who showed the syphilitic origin of onychia. But this statement, which appears to be well founded with regard to the adult, can by no means be extended to the disease which is so frequently observed in the fingers of cachectic children. The local phenomena are very different, and it is their situation alone which could have given origin to this error.

B.—VEGETATIONS.—Vegetations have been divided into excrescences and into vegetations properly so called. Most authors who have adopted this division, consider excrescences as prolongation of folds of the skin or of the mucous membranes, formed by the inflammation and the development of the subjacent tissues. Vegetations, on the contrary, are composed of a tissue of new formation which has a tendency to grow; they are either sessile or pediculated, and occasion-

ally very vascular. The variety of their forms has given rise to such denominations as cauliflower or strawberry excrescences, &c. Whatever may be their form and variety, these vegetations do not always arise under the same circumstances. It is very true that they may follow chancres or mucous patches. This sufficiently explains their constant admission among the symptoms depending exclusively on syphilis. But a deeper study of the facts has enabled the learned syphiliographer of the *Hôpital du Midi* to establish clearly that the production of these vegetations is not solely owing to the syphilitic virus: he also rejects the established distinction into primary and secondary vegetations. They are neither the proofs of recent infection nor of a constitutional taint. When they have not been preceded by primary venereal symptoms or by constitutional syphilis, they are the consequence of local irritations, as is sometimes, though rarely, observed in children free from any contamination during the second and third period of infancy.

Dr. THIBERGE has, moreover, in an excellent work, abundantly demonstrated the truth of these assertions. He denies the specific character of any vegetation. He shows that these productions are, in pregnant women, merely the effects of gestation, which disappear spontaneously after delivery. Dr. DUFOUR, junior, has published a very remarkable case of vegetations developed upon the genital organs of a very little girl. This abnormal product appeared to him to have been the result of an inflammation of the mucous membrane of the same nature as catarrh and granulation.

These opinions are, at present, admitted to a certain extent, without serious opposition. We shall, therefore, only mention these characters of suspected syphilis, which few physicians now consider as specific signs of infection; the majority of them look upon vegetations as local affections which must be treated by local remedies.

C.—EXTERNAL APPEARANCE.—A child, whether syphilitic or not, may be born with all the signs of health. It, nevertheless, frequently occurs, as proved by numerous observations, that these little creatures present from birth that peculiar aspect which DOUBLET has happily called *the miniature of decrepitude*. The comparison is, indeed, very apt: they resemble old people by their emaciated, shrivelled aspect, and by the flaccidity and discolouration of the skin.

This discolouration is so general and complete, that it may be doubted whether the blood circulates through the integument. The mucous membranes, as far as they can be observed, share this pallor. All the symptoms indicating marasmus, appear in succession. The eyes are deeply sunk; the face presents well-marked wrinkles; and the forehead shows transverse furrows more or less deep, just as in old age. Then we may observe the different furrows described by EUSEBIUS DE SALLES and M. JADELOT, viz., the oculo-zygomatic, the nasal, the labial, and the maxillary; which, contrary to the too exclusive opinions of these authors, have no other semeiological value than that of indicating the wasting away of the child.* The wrinkles and furrows resulting from emaciation are not merely observed in the face, but also on the neck, the limbs, and especially on the abdomen, as seen in old women. This external appearance and the strange aspect which accompanies it have been described by many authors, among whom, following the example of our friend HERVIEUX, we quote DOUBLET, BILLARD, CAZENAVE, BOUCHUT, GRISOLLE, MONNERET, TROUSSEAU and LASÈGUE, FLEURY, &c. This condition has unfortunately given rise to a variety of interpretations, so that at this time a practitioner called upon to treat one of these children, who are called *little old men*, would either feel much embarrassed to form a diagnosis and to suggest a proper

* See an excellent contribution by Dr. HERVIEUX, *Union Médical*, 1855, p. 202.

treatment; or, following the errors of certain writers, he might consider the child to be constitutionally tainted, in which case it is not only the particular organisation of the infant to which its premature decrepitude would be owing, but, what is more important, to the former state of health of the parent or nurse.

This decrepitude has, on the faith of a number of assertions, been for a long time considered as a pathognomonic sign of congenital syphilis; and opinions are still divided on this question. Thus, while CAZENAVE, MONNERET, FLEURY, GRISOLLE, &c., look upon the decrepit aspect as a sign of syphilis, BILLARD believes that enteritis is the cause of it; VALLEIX ascribes it to thrush; and, finally, BOUCHUT considers it as the result of gastro-enteritis, or chronic pneumonia*.

In the midst of these contradictions it is safe to say, that this external appearance is proper to cachexias of whatever kind they may be. Professor TROUSSEAU and Dr. LASÈGUE have minutely described a colour in the face, which is well marked when the child is quiet and the features in repose. This may be observed around the orifices of the nose, on the margin of the eyebrows, in the naso-labial furrow, above the upper and beneath the lower lip, also in the hollow of the chin, it appears as a deep smoky tint, differing much from the natural colour of the skin. Another alteration exists, which frequently coincides with other external signs of syphilis, to which attention has been drawn in the following description by MM. TROUSSEAU and LASÈGUE.

“We must, in the development of these local alterations, distinguish two periods of uncertain duration, the first of which may be so short as to escape observation. In the first place, the skin covering the palms of the hands and

* *Traité pratique des Maladies des nouveau-nés.* Third edition: Paris, 1855.

the soles of the feet is rugous; it becomes remarkably thickened, and its wrinkles exactly resemble those seen in the hands of women who wash linen in strong solutions of potash; at the same time the parts swell and become more or less red. At other times, in place of even a slight redness, the plantar and palmar surfaces are pale and yellowish; the epidermis becomes hardened and considerably thicker, and even the dermis seems to participate in the induration. In all the parts corresponding to the articulations, and consequently in the natural folds of the skin, there are seen deep fissures, either ulcerated or not. The folds of the wrist are not more exempt than those of the phalanges. The disease in general remains stationary but for a short time; at a later period, epidermic scales are formed and renewed; but this form of psoriasis is but transient. After a few days the scales, if they have been produced, are no longer separated. The epidermis is detached in patches, and the surfaces present a new aspect, which constitutes the second degree. The swelling has disappeared, the fingers and the toes are soft; the hardened epidermis has been replaced by one of new formation, and so thin that we shall be under the truth in comparing it to the pellicle of an onion. The skin on being pressed exhibits a number of grooves extremely close together, such as we see upon certain recent cicatrices. In some parts, as on the heel, the squamous covering may yet remain for some time. The feet and the hands, no matter whether they have previously been red or pale, acquire invariably a livid colour without a coppery tint. The violet colour is especially intense at the extremity of the phalanges round the nails; the nails soften and the subjacent tissue is much injected. It is not unusual for small ulcers to be formed and for whitlows to appear on one or two fingers. This latter complication is, however, not intimately allied to the preceding phenomena; it is observed

in many other circumstances, and seems chiefly to depend upon the general condition of the patient."

We must take care not to confound the latter symptoms with certain appearances which the bullæ of pemphigus may present after their rupture, and we must remember that syphilitic pemphigus shows itself equally on the palmar and plantar surfaces of the extremities. There are many other lesions pointed out by DOUBLET which must be carefully distinguished from syphilis, and of which we shall speak in the article on phagedenic gangrene.

Is this external appearance something special, or does it resemble those cachectic conditions which result from misery, want, different maladies, &c.? Some have considered this decrepit state as we have already stated, to be a characteristic mark of syphilis. We dissent from this opinion, as we have seen this condition in new-born children without the least trace of syphilis in their parents or their brethren.

It is with this symptom as with pemphigus, as we shall see in the sequel. Moreover, the contradictory opinions prevailing with regard to the decrepit external aspect of the new-born, prove in a decisive manner that it would be very erroneous to consider it as a constant sign of syphilis.

Like cachectic pemphigus, it succeeds to all diseases which have rendered the fœtus or the new-born child cachectic. These two symptoms only appear when the vitality is nearly extinct. They may also both be the expression of a general taint, seeing that we have established the destructive action of congenital syphilis during intra-uterine life.

D.—ROSEOLA. ERYTHEMA.—Roseola in new-born children, like that occurring in the adult, has been considered as a sign of syphilis.

Notwithstanding the earnest desire to recognize this affection by the very marked characters ascribed to it by many authors, such as its coppery tint and its fugacity, we still

find it impossible to see in it anything specific. The study of these descriptions derived from the observation of syphilitic children, as well as of others who are not affected with that virulent disease, will show that they exhibit the very natural desire of throwing light on an obscure and difficult subject; but in which, unfortunately, events occur otherwise than in the adult. This constant comparison of infantile syphilis with that of another age, gives rise, on this point as on so many others, to erroneous suppositions. The so-called syphilitic roseola, as well as simple roseola of new-born children, is observed on the abdomen and chest, and especially on the legs, in the form of circular spots of variable size, recalling somewhat the appearance of measles. The colour changes according to the phases in which it is observed, being sometimes dark red, at others violet, or more or less of a coppery tint. But with regard to this tint we must remember how many practitioners, habitually treating new-born children, distrust the signification of this symptom which is very important in the adult, because in the child the skin is commonly of a deep red colour, and when it disappears it passes through various changes in colour becoming less and less deep in tint. During these changes a well-marked coppery shade may show itself without the presence of syphilitic poison. Roseola is very fugacious; it appears for a few hours, and disappears to return again after a short time. It is mostly symptomatic of a general disturbance in the health of the child, and hence frequently precedes pustular, vesicular, or other cutaneous affections. At other times roseola appears in new-born children who are insufficiently nourished or deprived of proper hygienic care. Its pathogeny singularly resembles that of erythema, from which it differs very little, and which is characterised by a superficial redness of the skin in particular places—as the buttocks, the groins, the feet, the ankles, the hands, &c.

Erythema in the new-born is not a simple phenomenon, but one, on the contrary, very complicated in its character and consequences. It may be the result of pressure or of the prolonged contact of any rough body; but it is also produced under the influence of causes depending upon the general condition of the patient, as has been shown by VALLEIX. It is the last mentioned form which always—without any exception—appears in new-born cachectic children. The contact of faecal matter, or of urine may, it is true, produce it; but it is not less true that it appears more or less constantly in the course of infantile cachexia, and it is the starting-point of a variety of cutaneous affections.

Erythema usually appears at first about the anus and the vulva, or in the genito-crural folds. If proper care be taken, and particularly if the health of the child improves, the erythema disappears more or less rapidly, either with or without desquamation; but if the general state becomes worse, the erythematous redness increases. Then, in the centre of it, according to the degree of vitality in the patient, or the prevailing epidemics, phagedenic gangrenous ulcers of circular form with perpendicular edges and of a dirty aspect appear, which cause the nurses to say that the children are unhealthy or tainted, and that they have the evil, &c. (*See Cutaneous Cachectic Affections.*)

Such, however, are not the most common consequences of erythema. It very frequently happens that upon certain parts—as the ankles, the feet, the hands—the erythema is for days and even weeks of a red colour, shining as if the denuded dermis were covered with a layer of varnish; then very superficial excoriations appear upon the most inflamed spots. These denuded spots do not suppurate, nor are they moist unless they come in contact, as in the cutaneous folds. After the lapse of a certain time these excoriations heal by the production of a layer of epidermis

which may disappear again, and this condition may continue for a longer or shorter time. If the child resists the influence of the disease, and the health improves under proper care, the epidermis is gradually reproduced at the same time that the erythema disappears, but when, on the contrary, the child is insufficiently nourished, or in an unhealthy condition, the erythema extends; it then frequently attacks the whole of the inferior half of the trunk with ulcers, gangrenous or otherwise, about the ankles, the vulva, and the anus. Finally, coryza and thrush appear, preceded very frequently by a diarrhoea which cannot be restrained, and the child dies in a state of cachexia, the chief features of which are alike in every case.

DOUBLET has, as BERTIN observes, too exclusively attributed the ulcers which appear in children, upon the head, the neck, the groins, the ankles, and the heels, to the dirty state of the linen, to the contact of urine, or to the weight of the body always pressing upon the same spots. In speaking of chancres in infantile syphilis, BERTIN says, with regard to certain venereal ulcers: "The feet have a special symptom which is peculiar to them—the redness and inflammation of the heel. This redness becomes vivid, the skin ulcerates and becomes detached from the cellular tissue which connects the integument to the calcaneum, and the cushion, which forms the heel, is thus separated."

E.—These different cachectic lesions, which we have studied in cases where there was no suspicion of syphilis—after having, wherever it was possible, investigated for ourselves the state of health of the parents, and of the brothers and sisters of the patients—are more frequent than is generally believed. They can be easily studied in hospitals, or among the new-born in the families of the indigent, whilst their independence of syphilis is confirmed by the fact that we find them to be exactly similar, with the exception of some slight and inevitable deviations, to those occurring at a later

period of infancy. It is well known that infantile syphilis is rarely long in making its appearance. There are but very few authors who admit that hereditary syphilis may appear so late as from the seventh to the tenth month. All or almost all agree in fixing upon the first few months after birth as the usual period of its appearance. It follows, therefore, that excluding direct infection, the occurrence of syphilis during the second period of infancy must be a real exception. Consequently, if cutaneous cachectic affections—such as ecthyma, phagedenic gangrene, &c.—appear with the same characters during the short duration of cachexia in the new-born, we are led to suspect the absence of syphilis in certain new-born children presenting affections, the supposed specific characters of which are either invisible or so delicate that they may be considered as illusory. Are we, then, not entitled to doubt the existence of syphilis, especially when, in babes insufficiently nourished, and exhausted, we see excoriations succeed to a more or less persistent erythema and to ecthymatous pustules with a tendency to degenerate into ulcers, having an unhealthy and sanious aspect? When we observe that neither the parents nor the children show any trace of syphilis, if the infant supposed to be syphilitic has not been properly suckled so that it has suffered from hunger—which is frequently the case—ought we not to discard syphilis, notwithstanding that in most classical treatises on the subject these signs are considered as characteristic of the disease?

Cracked nipples cause very severe pain to the nurse, are sometimes the indirect cause of the wasting away of their nurslings.

It often has occurred that a mother suckling a foster-child in addition to her own baby, begins to suffer from a sore nipple in one breast, which from fear of contagion she naturally offers to the foster-child: the latter begins to

waste, or even before that occurs, more or less important eruptions appear, whilst its foster-brother continues to thrive.

After a time, which may be very short, the phenomena become more distinct; the sickly child becomes cachectic, and then exhibits some of those cutaneous affections which simulate syphilis. If the nurse be not changed soon enough, death may confirm the suspicions which are always energetically expressed either by the nurse or by the family of the infant.

The facility with which some physicians pronounce certain infantile cutaneous affections which are not ordinarily met with, to be the result of syphilitic infection, is remarkable; and there are even some who recognise in the new-born infant *syphilitic acne*, *impetigo*, &c.

We must bear in mind that, towards the end of the last century, thrush and many other symptoms unconnected with syphilis were considered as characteristic marks of that disease (DOUBLET). BERTIN observes that the mucous membranes "of the eyes, the nose, the ears, the vagina, the urethra, and the anus, may in new-born children be affected by venereal catarrh. This produces a discharge of a greenish colour, with more or less violent irritation. Several of these blennorrhagias may exist at the same time, or they may succeed each other in different parts. They rapidly disappear, and reappear on some other membrane, and frequently to the injury of the organ that they attack."—OBSERVATION 3.

"Sophie A. —, aged twenty-six months, suffered for the last two months from a vaginal discharge, which disappeared fifteen days after her admission, and was replaced by ophthalmia and pustular eruptions on the face. She was treated by the administration of bichloride of mercury, and she completely recovered."

BERTIN, who is considered an authority, and whose opinions

* *Traité de la Maladie Vénérienne chez les nouveau-nés.* Paris, 1810.

concerning infantile syphilis are daily quoted, makes the following observations on *chancres and venereal ulcers* (page 56).

"A partial elevation of the epidermis—a small vesicle, a bulla scarcely perceptible at its commencement, which quickly breaks and exhibits a simple erosion, or a minute ulcer, which gradually enlarges and becomes white, discharging a serous or ichorous matter more or less fetid: is *the chancre*, or *chancreous ulcer*. This matter sometimes becomes *liquid and blackish*, which indicates *approaching gangrene*. It is chiefly on the head and face of the new-born that these ulcers terminate in this manner. We know that one of the general characters of venereal chancres is their indurated, elevated, and unequal edges; but their form varies according to the parts which they attack. These ulcers are like other venereal symptoms divided into primary and secondary; both of which are sometimes situated upon the skin and sometimes upon the mucous membrane. Pathologists have tried hard to distinguish venereal ulcers according to their seat, and their primary or secondary origin. But those physicians and surgeons who have the opportunity of observing these ulcers from the commencement, and of following them in their progress and development, though convinced that their form differs according to a variety of circumstances, which I need not mention, are still often embarrassed in their diagnosis, and are sometimes unable to judge of the true characters of these ulcers unless aided by commemorative signs. The circular form and the vertical edge, which have been attributed to chancres or primary ulcers, are not constant; they vary not merely according as they attack the mucous membrane or the skin, but also according to the different parts of these structures."

"Both usually present a greater or lesser degree of induration at their edges. Primary ulcers, however, sometimes offer only superficial excoriations without any hardness. An

ulcer affecting the skin, whether it be primary or secondary, is covered with a scab, which is reproduced after removal, in which respect it much resembles ulcers following pustules. Secondary ulcers are not so frequently preceded by vesicles as primary ones. They sometimes commence in the form of pustules, papulæ, or vesicles. In some cases they destroy the skin, the cellular tissue, the muscular fibres, and even the periosteum. I have observed this in a child, which I some time since opened in the presence of MM. CULLERIER, STUBERT, GILBERT, and some other physicians. The margins of this ulcer were not hard as they generally are, and they were regularly defined. We should in children, as well as in adults, distinguish chancres into superficial and deep, inflammatory and atonic, simple and malignant, indolent and spreading. These distinctions are not to be neglected; they are not purely arbitrary, and they require a different treatment. If more attention were paid to this in practice we should not so frequently see the fatal termination of ulcers, which might have been easily cured by diluents and anodynes. Our predecessors had carefully observed that chancres, having their seat in the frænum of the tongue of the child, present the appearance of a burn or of an inflamed erosion; but this is far from being constant. They present themselves now and then in the form of fissures, or true ulcers, on the internal surface of the cheek, the soft palate, and the back of the mouth and throat. They commence by minute raised circular spots, which soon exhibit an ulcer with a whitish base and raised edges. About the anus and the umbilicus they receive the name of rhagades. I have frequently seen them in this form in new-born children. They often co-exist with those in the mouth; they also appear in this form on the feet and hands, and extend to the roots of the nails, which they cause to fall off. I have seen this symptom twice in children confided to my care."

It is evident that BERTIN has here described, as real chancres and venereal ulcers, the various stages of infantile phagedenic gangrene. How different from the vague descriptions of chancrous and scabby ulcers, &c., is the history of mucous patches which are easily recognised, and which are to congenital syphilis what chancre is to acquired syphilis. We hear every day, both in the medical and non-medical worlds, that an infant is born covered with pustules: this expression conveys no accurate information, and is of no further importance than as preparing us for the advent of various and dissimilar lesions.

And yet BERTIN himself, who has referred to infantile syphilis many symptoms which are often independent of it, observes, "It might be very desirable if we could, in an exact and positive manner, distinguish *venereal eruptions* from those which are not so. I am not aware that physicians who have made this subject their special study have been more fortunate than I have been in this respect. I have carefully studied and observed the various species of *tetter* in syphilitic children, and I have only met with its ordinary forms. We are frequently unable to trace their causes in the adult except by the declarations of the patient, or from the action of remedies. The different species of *tetter* ought to arouse our suspicions, but they afford no proof of the existence of syphilis."

What prudent caution! How few of modern writers have imitated it!

But amidst all the numerous, contradictory, and obscure phenomena which encumber the history of infantile syphilis, there is one very striking fact, namely, the small number of syphilitic children produced by such a large number of infected parents. How rare infantile syphilis is, may be seen in the Hospital de Lourcine at Paris, and in the provincial dispensaries. We may also consult above the synopsis of

LEGENDRE in order to assure ourselves how small the number of infected children is, notwithstanding the great number of syphilitic parents. We saw last year in the Necker Hospital, a young mother, under the care of Professor NATALIS GUILLOT, who had for three months undergone anti-syphilitic treatment on account of mucous patches on the vulva. Her infant, three months and a half old, had been healthy and vigorous from its birth.*

ARTICLE III.—TREATMENT OF SYPHILIS.

We have endeavoured to show, contrary to the opinions of many authors, that hereditary syphilis is rare, and that many syphilitic parents generate children not merely free from any syphilitic taint, but perfectly healthy and vigorous. What practitioner has not had patients who were undoubtedly syphilitic, and yet whose children enjoy robust health?

The existence of syphilis, however, being once positively established in a new-born infant, what is the most proper treatment to be adopted? and at what period should it be commenced? These are the first two questions which arise when a case of infantile syphilis occurs.

We have noticed the marked differences which distinguish adult from infantile syphilis; and, notwithstanding the numerous and fruitless attempts to make their stages correspond with each other, it has always been found impossible to arrive at any useful practical results founded on these false analogies. Thus, *à priori*, iodide of potassium would seem to be indicated when the infant exhibits symptoms more or less resembling the tertiary lesions of the adult, and still more so when the syphilitic child is born of parents suffering from the characteristic symptoms of that diathesis.

All these theories are valueless in the face of clinical obser-

* Some cases are here omitted.—(E.D.)

vation. If we read attentively the numerous cases of recovery from infantile syphilis, and note the curative means which have been employed, we shall be convinced that in the majority of them the existence of syphilis is more than doubtful; and, further, that the variety of these lesions is so great that the changes they undergo under the influence of therapeutic means will not warrant us in forming an opinion as to the superiority of any remedy with reference to any given symptom.

In accordance with our own observations we think that mercury should be prescribed in the form of proto-iodide; the bichloride requires too much dilution to admit of its administration to new-born children.

Mercury administered through the medium of the milk of the nurse or of an animal, formerly enjoyed much favour. The indirect treatment by this means was highly extolled by COLOMBIER, DOUBLET, FAGUER, and BERTIN. The latter remarks that the milk of the nurse frequently suffices for the cure of the child intrusted to her. He cites the case of a child, *covered with pustules on the thighs and legs*, reduced to a cachectic state, and too weak for the direct administration of remedies, who recovered its health under the influence of the mercurialized milk of its mother. It is well known that M. CULLERIER, in a paper published in 1852, in the *Bulletin de Thérapeutique*, endeavoured to demonstrate chemically that the presence of mercury in the milk of a nurse, subjected to mercurial treatment, was quite insufficient to produce any favourable effect upon the nursing. This practitioner, who was assisted in his investigation by the chemists, RÉVEIL and PERSONNE, has decided against this mode of treatment; and yet it must be admitted that an immense number of cures are effected by it. But in studying the cases of pseudo-syphilis, which are so frequent, who can help admitting that if so many children

have been cured by mercurialized milk, it is merely from the benefit which they have derived from the milk itself without having in any way been injured or improved by the infinitesimal quantity of the iodide of mercury administered to the nurse. It is not then with reference to syphilis and the cachectic conditions which so frequently simulate it, that we must accept in its absolute sense the example given by HIPPOCRATES, of a woman whose children were purged after they had partaken of the milk of a goat which had eaten of the *momordica elaterium*.^{*} Mercury, nevertheless, enters freely into the animal economy by means of frictions upon the skin. Besides the unquestionable proofs of this from other sources, we find that GRAVES boiled for an hour several parts of the skeleton of a young woman who died after having been subjected to an internal and external mercurial treatment: he was able to collect more than a drachm and a half of mercury.[†]

This medicament has for a long time been administered to animals, to impart a curative property to their milk (ASSALINI, 1787, Turin). The practice is still followed even in Paris, where several establishments exist in which various medicaments are introduced with more or less success into the milk of animals. We have had no opportunity of personally judging of the value of this method, but it appears to us that the greater part of these animals could not, with impunity, withstand the internal and external administration of so powerful an agent as mercury and its compounds.

So it is with adults, and especially with children. When mercury is administered by friction, the constitutional effect

^{*} Œuvres complètes d' HIPPOCRATE, traduction Littré. Paris, 1846. Tome v, page 323.

[†] The author is not quite accurate here. The case referred to is quoted by GRAVES from a paper by Dr. GUNTHER in FRICKE'S *Annals*, and the quantity of mercury said to have been obtained is "somewhat more than half a drachm."—(ED.)

is easily produced, and the first effect upon the child is a decolouration of the mucous membrane, the blood losing its globules rapidly. The mercurial cachexia seems also to be more formidable at that age than at any other. Hence we think, in opposition to the well known opinion of CULLERIE, that the mercurial treatment by cutaneous friction is troublesome in children on account of the constant watching it requires and the accidents to which it is liable.* We much prefer the method employed by Professor N. GUILLOT, who has never abandoned it during the ten years he attended at the Foundling Hospital, and who still follows it at the Necker Hospital. Besides the hygienic treatment which consists—in the choice of a healthy nurse, or in her absence in the administration of proper food, in the maintenance of a suitable temperature, in exposure to light, and in proper cleanliness, &c., M. GUILLOT prefers to all other remedies, a julep containing twenty-five milligrams of the protiodide of mercury, a table-spoonfull of the liquid previously shaken, to be given every quarter of an hour. If the medicine gives rise to vomiting, which is by no means unusual, the interval between the doses should be half an hour. If, notwithstanding this precaution, the infant should continue to vomit, or diarrhoea or colic should supervene, the administration of the medicine must be suspended. Contrary to the precepts contained in many books, M. GUILLOT advises great caution with regard to the doses of protiodide, administered internally, but he recommends us to increase the strength of the mercurial bath, which may be done with safety. In fact, while most practitioners who are engaged in the treatment of the diseases

* Sir B. BRODIE strongly recommends the treatment of infantile syphilis by means of mercurial inunction, and states that "mercury given to the infant by the mouth gripes and purges severely," and that "very few of those children ultimately recover in whom the mercury has been given internally." (*Lectures on Pathology and Surgery*, p. 224-5.) We regret to be at issue with so high an authority as Sir B. BRODIE, but we cannot concur in the truth of these statements.—(Ed.)

of children, dare not increase the quantity of bichloride in a bath beyond from fifty centigrams to a gramme, M. GUILLOT does not hesitate to increase the dose to ten grammes, and to add to it six grammes of the hydro-chlorate of ammonia. With reference to these baths we maintain that they are quite harmless. Whatever may be their frequency and duration, *salivation* never results from them, and we have never seen any accident arise which could be imputed to them. On the contrary, we have always been surprised at the favourable local action of the bichloride when employed in this way, not merely in cutaneous syphilitic disorders, but in all kinds of skin diseases. Many times have we witnessed the energetic curative action of this agent over lesions which were independent of any specific cause.

The questions with regard to the duration of the mercurial treatment and of the most appropriate time for its commencement are not precisely stated by authors. The greater portion of them do not praise any preventative treatment. It seems to us that we should at least wait, before inflicting a mercurial treatment upon the new-born child, until the diagnosis is confirmed by a strict investigation, knowing how frequently healthy children issue from a tainted source. The duration of the treatment should not generally be in proportion to the persistence of the lesions. When the child regains its strength and flesh, when all the functions proceed regularly, it is not advisable to continue the anti-syphilitic agent until the cutaneous lesions disappear, for if administered beyond a certain time, it produces derangements of the bowels which require its discontinuance. The mercurial baths alone may be continued without any inconvenience, taking care to administer them at shorter or longer intervals, according to the exigencies of particular cases.*

* The administration of the more powerful preparations of mercury, such as the iodide and the bichloride, is, we think, quite unnecessary in cases of

SECOND CLASS.—STROPHULOUS DISEASES.

Strophulous affections are generally not of much importance; hence many of them are unobserved by the physician. Mothers and nurses give them but little attention, and designate them by the names of red-gum, tooth-rash, &c. This class comprehends several papular, vesicular, pustular, and erythematous lesions. It consists most frequently of red or white pruriginous papulæ, of variable size, showing themselves chiefly during the process of dentition, upon the face and the inferior extremities. It is, in fact, the most prominent character of strophulus that it is connected with the constitutional disturbance which is excited in young subjects by the process of dentition, consequently lichenoid papulæ should not alone be considered as constituting the group of strophulous diseases. We give the name of strophulus to every ephemeral eruption, whatever may be its anatomical character, when it appears under the influence of dentition, and exhibits the benignity habitual to the cutaneous affections of this group.

In fact it frequently happens that vesicles, either isolated or united in small groups and of short duration, are developed under the influence of the same cause which produces those papulæ to which the name of *strophulus* is generally limited.

Strophulous diseases are less and less described, in propor-

infantile syphilis. The results of our own experience is in accordance with that of other practitioners, that the most severe cases may be both speedily and safely cured by hyd. c. cretâ and iodide of potassium, with a careful attention to the hygienic and dietetic means referred to in the text. Half a grain of hyd. c. cretâ with one grain of iodide of potassium twice a day are quite sufficient for an infant at the breast.—(Ed.)

tion as the analysis of the lesions separates the facts which clinical observation tends on the contrary to approximate.

BATEMAN observes, however, after WILLAN, "Strophulus comprises several papular affections peculiar to infants at the breast, which are known by the common name of aphthæ or tooth-rash. These diseases manifest themselves on account of the very excitable state of the vascular system and the irritability of the skin at this period of life, when the constitution is accidentally deranged by some irritation in the alimentary canal, the gums, or in any other part."

The varieties of strophulus are necessarily very numerous, and our mode of viewing these eruptions contributes to increase the number of them. The principal of these admitted by authors and connected with lichen are:

1st.—*Strophulus intertinctus*, formed by papulæ of a vivid red colour, prominent, and intermixed with erythematous spots of variable size.

2nd.—*Strophulus albidus*, when the papulæ are small, white, and surrounded by a slight redness.

3rd.—*Strophulus candidus*, when the papulæ are of considerable size, without exhibiting any redness at the base.

4th.—*Strophulus volaticus*, when the ephemeral papulæ united in patches disappear very rapidly.

5th.—When the papulæ are very numerous upon the trunk, the face, or the limbs, they have received the name of *Strophulus confertus*.

None of these varieties are contagious, nor are any of the group of strophulous diseases. They present great varieties in their dimensions and colour, as well as in their number and disposition. But, in common with the following varieties, they are very variable with regard to their duration. Thus, sometimes they appear in the morning and disappear in the evening; at other times they persist and only disappear after the lapse of seven or fourteen days, leaving behind a yellowish

tint with a furfuraceous desquamation. Finally, some species perpetuate themselves for a certain time by successive eruptions, which, after a duration from four to five days, disappear with a slight desquamation.

We have seen true roseola co-exist with strophulous papulæ, at other times small vesicles, either isolated or aggregated. More frequently vesicular or pustular eruptions develop themselves upon a large erythematous patch. Sometimes also the vesicles, pustules, and papulæ are absent; then we only observe a red erythematous patch, which occupies a part of one side of the face, the duration of which does not generally exceed twenty-four hours.

These partial erythemata, these ephemeral vesicles, these pustules, this roseola, appear to us to merit the generic name of strophulus, by the same right as lichenoid papulæ, to which it has been exclusively limited. They are produced by the same causes; they have the same favourable progress and termination; nothing, in a word, separates them from each other. Moreover, all these varieties of strophulus, so numerous and so like each other in their signification, are frequently met with in the same infant.

They have all the same degree of intense itching, which sometimes produces a certain degree of restlessness and want of sleep.

This state of uneasiness is often increased by derangements in the intestinal canal which usually accompany these cutaneous eruptions. Sometimes the congestion of the skin is repeated in the mucous membrane of the mouth; even in other places than in those where the teeth are about to appear, it manifests itself by slight, red suffusions, followed or not by aphthous eruptions.

The diagnosis never offers any serious difficulties; the acute progress of strophulus distinguishes it sufficiently from the chronic course of prurigo.

It is only in relation to lichen that doubts can arise, but the difference in age furnishes a sufficient mark of distinction. Strophulous affections are intimately connected with dentition; their appearance is consequently inseparable from the second stage of the first period of infancy.

Lichen does not exhibit the same variableness as strophulus—the exacerbations of the latter being directly allied to the process of dentition. After its disappearance, we do not observe that yellowish, coppery tint which is sometimes very persistent after lichen. Finally, strophulus is never succeeded by excoriations resembling those of lichen *agrius*. The prognosis of strophulus is never serious. It may, however, show itself during some very serious general conditions, which sometimes complicate difficult dentition, such as functional disorders of the digestive organs or of the cerebrum; but, in these conditions, strophulus is but an insignificant element.

Some physicians are of opinion that this slight affection has its almost exclusive seat on the skin around the mouth, but it is not so. On examining the whole cutaneous surface of children who exhibit spots of strophulus on the face, though otherwise quite well, an eruption under some form will frequently be found upon other parts of the body.*

* The majority of the cases of strophulus are met with in children who are under three years of age.

The proximate cause of this affection is nearly always either dentition, vaccination, or gastro-enteric irritation, resulting either from the unhealthy state of the nurse's milk or from improper diet; it is almost invariably accompanied, particularly in very young children, by a considerable amount of constitutional disturbance, and frequently by diarrhoea and vomiting. In the more severe cases some of the papulae may be observed to be surmounted by a small semi-transparent vesicle. This disease generally runs a very rapid course, and disappears completely in a few days; but in some cases, particularly when it is dependent on a chronic irritative condition of the gastro-intestinal mucous membrane, it frequently occurs in several successive crops, and it may ultimately become transformed into true lichen.

If the symptoms should disappear suddenly, and particularly if the eruption should be repelled by any means, vomiting and diarrhoea will frequently supervene.

TREATMENT OF STROPHULOUS DISEASES.

When in a well-formed child the development of strophulus is favoured by exciting causes acting directly upon the skin, the first indication is to preserve the body of the child from their influence. The itching should be assuaged by gentle friction of the papulæ with cold water containing a little salt or vinegar. When strophulus is symptomatic of a functional derangement of the digestive organs, it should be treated by an appropriate diet, withholding every aliment but the milk of the mother, and even by substituting sugar and water for the milk, entirely or partly. When the eruption is accompanied by heat and fever, these symptoms must be alleviated by daily tepid baths of a decoction of bran and marsh-mallows.

Cold baths diminish papular inflammations, and frequently cause them to disappear very rapidly; but they may also aggravate the derangements of the digestive organs, which very frequently complicate them during the process of dentition. In these circumstances, purgatives are mostly very injurious: they sometimes produce vomiting and obstinate diarrhoea. According to Dr. RAYER, emetics and tonics, recommended by WILLAN, should be avoided; for, during dentition, digestive disorders are frequent, and these remedies are rarely applicable. Some practitioners are in the habit of giving cooling draughts to the nurses.

THIRD CLASS.—LYMPHATIC DISEASES.

By the name of a lymphatic constitution is usually designated a kind of atony of the whole organism, coincident with plumpness, a pale skin, and puffiness and softness of the muscular tissue—a condition which is, nevertheless, compatible with a more or less perfect state of health. Clinical observation shows that the greater number of children who possess this constitution in an eminent degree, are predisposed to certain cutaneous affections which frequently occur among them. Although all the characteristic features of any temperament are not very distinctly marked in infancy, yet some general indications exist at this early age which enable us to recognise in a certain degree what we are accustomed to call temperament or, more correctly, constitution. The lymphatic temperament is the most frequently met with at this period of life, and it is certainly much the most common. This constitution is, in fact, almost as frequent as the scrofulous; but every one knows how vague and indeterminate the limits are in such matters. It is difficult to say, precisely, where scrofula commences and the lymphatic constitution terminates. Be this as it may, lymphatic predominance is the rule in children; and, where it is very marked, we meet in the first few months of life with certain affections (achores) which are compatible with the regular performance of all the functions. So, at a more advanced age, very lymphatic children possessing a delicate and sensitive skin are nearly always attacked by chilblains at certain periods of the year. With regard to the species of acne described in

this group, we have placed it here because all the children affected with it were most frequently scrofulous, or at any rate of an eminently lymphatic constitution. Without pretending by any means to attach to this curious variety of acne any particular signification in thus classing it among diseases seemingly dependent upon a lymphatic temperament, we merely intend to institute a simple comparison without prejudging whether there exists any relation of cause and effect between them.

SECTION I.—ACHOR.

By the name of *achores* we understand the secreting ulcers which appear upon the scalp and face. This disease, which is peculiar to infancy, presents up to the third and fourth year characters so decided that it is impossible to meet with them in the adult. The affection has received a variety of names according to the point of view of different authors. Thus it is called *tinea faciei* by FRANK; *porrigo larvalis* by WILLAN and BATEMAN; *achore* by ALBERT; *impetigo larvalis* by BIETT; &c.

The disorder makes its appearance in a variable manner; sometimes by pustules varying in size, at other times the first apparent elements are acuminate vesicles containing a yellowish liquid. These pustules or vesicles soon break, either spontaneously or by the action of the nails. When once open there issues from them a transparent and slightly yellowish liquid, which agglutinates the hair, forming soft, yellow crusts resembling honey. When the affection is thus produced, an important phenomenon occurs, which has caused it to be compared to eczema. We allude to the copious secretion which continues to flow without the appearance of any new pustules or vesicles. There issues, in fact, from the existing ulcers a clear transparent liquid, growing yellow as it becomes thicker, sometimes it is so

abundant that it is seen to flow constantly from beneath the crusts. When these are removed by scratching, or by topical applications of any kind, they expose moist surfaces of a bright red, upon which the apertures of the dermis may be plainly seen giving issue to this acrid liquid, the irritant qualities of which are shown by the red colour of the parts over which it flows. The chief pathological fact of this cutaneous affection is evidently the abundant secretion, which sometimes appears at the outset, succeeding small abscesses of the scalp, which, owing to their local tension and the consequent production of fever, have required the employment of the bistoury. It has been remarked that, concurrently with the abundant secretion, there is a considerable turgescence of the sub-cutaneous cellular tissue. It seems even that the irregular eminences which are seen around the secreting ulcers sink by the escape of the fluid contained in them through these outlets.

In most cases *achores* appear first upon the scalp, and extend over the face; they occupy the temples, the forehead, and the cheeks. It is easy to observe the size of the pustules upon the face, where they develop themselves with greater facility than upon the scalp. The eruption may gradually over-run the whole head; the scalp and the face being entirely covered with a kind of mask; the features are hidden under thick crusts, frequently lammellar and imbricated, from beneath which oozes a more or less viscid and fetid serum. Sometimes, again, the crusts are irregular in form, unequal, depressed, smooth or rugous; sometimes dry, but mostly moistened by the secretion. This mask is necessarily subject to many changes in aspect, as will be obvious if we consider that the crusts are constantly being renewed, and that the more or less intense irritation alternates either with a remission or, with the exacerbations of the itching. The itching is so violent that the children scratch their heads and faces

with their nails, so that it is quite common to see a mixture of blood and serum running down upon the affected parts, presenting a truly horrible aspect.

Yet in this face, hideous to behold, no part of which seems to have been respected by the eruption, the mucous membrane of the eye, the nose, and the buccal cavity are usually in a state of perfect integrity.

We lay stress upon this remarkable fact, as it is in striking contrast with what we have to observe regarding other cutaneous affections occupying the face in infants.

All authors have expressed their surprise that, notwithstanding the intensity of the disease of the scalp and the lacerations to which the face is subject, there never result from aches either permanent baldness or cicatrices in the face.

This eruption seems to produce a sero-purulent discharge from the skin, without modifying its structure. When the disease is fairly established, the children experience the most violent itching, which is increased towards the evening, during the first sleep, or during the day when the head is uncovered and exposed to the air. The children then cry, rub their heads against their shoulders, and, if their hands are free, they scratch themselves with a vehemence which testifies to the intensity of the smarting pains they suffer. The eruption persists sometimes for a considerable time behind the ears; the pustules are larger there than elsewhere, and the children cause excoriations by scratching; so that, in the cutaneous folds of that region, deep fissures are formed, from which there is considerable oozing.

In these conditions the cervical glands may become more or less affected, and give rise to adenitis, which, however, rarely terminates in suppuration.

The progress and the duration of the disease present great differences; the eruption may last for months, and even for

years, without perfect recovery; whilst, under other circumstances, the disease passes through all the phases of its evolution and decline within three or four weeks.

When the eruption is persistent, it necessarily offers a variety of aspects, owing to a continuous succession of what may be called the efforts of the disease. Thus the crusts, whether they fall off from excessive scratching or from complete desiccation, seem to become detached in scaly fragments, leaving no other mark than a slight redness, and tension of the scalp, which is soon again covered with vesicles, which give a new impulse to the disease. When it begins to disappear, the discharge diminishes, the crusts are less voluminous, and are but slowly reproduced; at length they cease altogether by a desquamation, leaving a slight rosy colour upon the skin, which very soon recovers its usual aspect. CASENAVE has well observed that *achores* are neither *eczema* nor *impetigo*. This infantile eruption is accompanied, it is true, by an enormous secretion which calls to mind that of *eczema*, but how great is the difference!

In *impetigo* the pustule is commonly similar to that seen in this disease, but the crusts of the scalp present a considerable difference, which it is only necessary to mention in order not to confound them; moreover, *impetigo* never furnishes that abundant fetid secretion which characterises the *achores*. If the term *achores* were not generally accepted, if the alterations which constitute it were not perfectly known, and if it were to be designated in accordance with its anatomico-pathological elements, it ought to be named *impetiginous eczema*, as some authors have called it. But we must recollect that *impetiginous eczema* occurs during adolescence and even in the adult, either combined or alternating with *eczematous* or *impetiginous cutaneous* affections, whilst *achores* have a particular appearance which is peculiar to them, and which is perfectly characteristic. If *impetiginous eczema*

sometimes presents the greater part of these characters, it is not less certain that it is generally separated from them by the age of the patients, and by the vesicles and pustules which exhibit considerable differences.

Achores have always a perfectly identical appearance when compared under the same conditions, viz.: during lactation. The eruption is, in point of fact, intimately connected with the first period of life. Clinical observation shows that achores are only developed under the influence of a general condition which is usually called lymphatic; nevertheless, robust and ruddy children are far from being exempt, rather the contrary, but it is well known that in the infant a fresh and rosy complexion may conceal a lymphatic constitution. Achores are generally so much under the influence of the constitutional peculiarities of the organism that they may frequently be looked upon as hereditary. Whole families, even many generations, are, during the period of lactation, subject to this affection. In addition to the predisposition it is very important to recognise the influence of diet. Milk which is too rich will sometimes occasion this eruption, in which case a change of the nurse will supply the remedy. It is a remarkable fact, and one which supports the opinion that achores arise from a general condition of the system, that want of cleanliness, and pedicular affections, will produce impetigo or eczema, whilst the children of the rich are as much subject to achores as those of the poor.

When a child receives the very rich milk of a nurse and takes it in excess, it may, if the stomach digests it, thus acquire a predisposition to achores, as observed by PETER FRANK.*

"It is not on account of the viscid or acid mucus which is mixed up in the mass of humours, but because the nutritive juices accumulate and abound in the system, and perhaps, as young trees in a fertile soil exude the gummy juices

* *Traité de Médecine pratique.* Paris, 1842; t. 1, p. 371.

which make their appearance on the bark, so during the first and second period of infancy, robust and well nourished children pour out a superabundant humour—the lymphatic ichor, which coagulates and collects upon their heads.”

It is a popular opinion that exudative eruptions on the scalp are salutary to children. Assuredly diseases are not generally necessary for the preservation of health; and yet it is difficult not to admit that there are voracious, fat, and plethoric children, in whom nature seems to require an outlet for the superfluous products of nutrition which are not required for the rapid growth of the body. In cases of this disease a fatal result has not unfrequently happened from an ill-timed cure. But in our days many experienced physicians do not accept the exaggerated opinion that nearly all the cutaneous affections of infants designated by the common name of *gourmes* should be left to themselves. The exaggeration of a good thing or a good maxim is always injurious. Though it may appear retrograding towards an exploded doctrine to admit the danger of curing certain infantile cutaneous affections, we still do not hesitate to accept this practical truth enunciated by the older physicians. We must bear in mind what occurs during the progress of *achores*. Mothers and nurses observe when the crusts become dry, and are no longer moistened by the secretion, that the children become dull, taciturn, uneasy, and sickly. As soon as the excrementitious matter reappears, the face is again animated, and the various functions are performed with regularity. These significant facts acquire great value when we reflect on the importance attached in pathology to abundant morbid discharges which have continued for a long period. The danger resulting from the sudden stoppage of these secretions is pointed out by the fatal cases cited by various authors. I witnessed a fact of this kind in 1849. A child about two years of age, suffered for many months from

achores in a very high degree. The health was good, the external aspect, excepting the eruption, was highly satisfactory. Topical applications of oil of cade were prescribed, with the caution that it should only be applied to a small surface at once, so that the cure might progress gradually. The nurse, in her misplaced zeal, covered with it the whole face and a portion of the scalp. Twenty-four hours after the sudden stoppage of the abundant secretion the child was attacked with catarrhal pneumonia so rapid in its progress that nothing could check it. Recently, an eminent practitioner, my excellent friend Dr. BECQUET, has witnessed an analogous case, in which death supervened from a cerebral affection.

There exist in science so many facts of this kind, which have been collected by practitioners of every period, and which, consequently, are above any suspicion of preconceived theory, that it is impossible not to admit the relation of cause and effect between the sudden stoppage of the plastic exudation and the production of various diseases which suddenly appear. Moreover, both physiology and pathology can account for facts of this kind.

There are some among contemporary physicians who decidedly reject this opinion, and who will not admit that we should thus voluntarily submit to the continuance of any disease, however benign. It appears to us that they are in the right with regard to most cutaneous affections; such, for instance, as those which are, so to say, only a deviation from the healthy state, which do not induce a considerable secretion, and are without much importance in respect to the phenomena of nutrition and growth. In these cases, we believe that therapeutics may generally intervene abruptly with advantage. But in relation to this, which appears to us to be the truth, there exists what may be termed an apparent refutation of our opinion. During the

progress of *achores* it sometimes happens that the abundant secretion, which cannot be suddenly arrested without injury, becomes itself the source of exhaustion; it is then that the physician is called upon to act. The progressive diminution and the final suppression of the morbid discharge will then have a salutary effect upon the health of the little patient.

Facts of this kind, compared with certain cutaneous affections which have been cured with advantage to the health of children, are calculated to weaken our belief in the humoral hypothesis, and at the same time to convince us that the precept is erroneous which enjoins us to neglect *achores* if the general health does not suffer.

SECTION II.—*PERNIO*—CHILBLAINS.

By the term *chilblains* is generally understood a swelling which is at first pruriginous, and subsequently painful, of a rosy or livid colour, frequently followed by ulcers, which attack some of the extreme parts of the body, especially the fingers, toes, nose, ears, and heels, which are the most frequent seats of it. Most authors consider *gangrene* as one of the phases of this affection. We are not of this opinion; for it appears to us an error to confound congelation with *chilblain*, and to admit that the former is, in some sort, the termination of the latter. It is not thus that we should interpret the following facts. It is true that *gangrene* may be complicated with *chilblain*; but this, as we have seen, is because *cachectic* infantile *gangrene* attacks exhausted children, and with greater facility, inasmuch as the ulcers offer a favourable opportunity for the development of the *cachectic phagedenic* state peculiar to infancy. *Gangrene* from cold belongs to a different class of phenomena, the description of which removes it as far as possible from *chilblain*, and is one

of the best proofs of the marked difference which separates them. These two morbid conditions are produced under the influence of causes diametrically opposite, and which exclude each other. As we shall see in examining the causes of chilblain, it requires for its production a cold and moist season, associated with sudden variations of temperature. Dr. BRIEUDE has shown that in the mountains of Auvergne the affection is not observed in those altitudes where the temperature is intensely cold, whilst it is common in the temperate climate of the valleys.

Like all cutaneous diseases, chilblains have a natural course, consisting of different phases which may be observed during their continuance. As soon as the general and special causes suffice for their production, the skin presents in the parts affected a certain pallor, speedily followed by a more or less intense redness, accompanied with pruriginous itchings, and sometimes even with considerable pain. After a certain time the redness increases, and becomes purple. Then, if the affection be not arrested, which often happens at this stage, the epidermis is raised in the form of small blisters, usually filled with a reddish or sanguinolent serum. The epidermis then generally gives way, and an irregular ulcer, rather difficult to heal, is the consequence. These are the three chief phases which characterise chilblains. They are frequently met with in the same patient; and it is not rare to find, as in burns, the various stages occurring together upon the same part.

The principal facts in the first period are the erythema, itching, and a slight cedematous swelling of the affected parts. The latter generally presents an oval or circular form. If they were not constantly situated on the extremities we might with tolerable accuracy compare them to a certain phasis of erythema nodosum. The skin thus affected presents, in the centre of the red spot, a shining aspect,

which is sometimes, on the other hand, replaced by a series of very small ridges or cutaneous folds, as if abrupt variations had occurred in the volume of these parts, and thus caused them to appear shrivelled.

The itching is rather peculiar, it is limited exactly to the affected spots, and sometimes accompanied with a burning sensation, which torments and irritates nervous children. The heat of the bed constantly produces very painful exacerbations. Under the influence of cold and heat there frequently supervenes at this period a diffused swelling, which extends more or less to the surrounding parts, rendering the movements of the fingers and toes more difficult.

The second period constitutes a higher degree of the disease. The phlyctenæ—which are generally situated on the palmar surface of the last phalanges of the fingers, and and on the plantar surface of the toes, or upon the posterior part of the heel—are flattened and filled with a sanguinolent serum. The skin upon which the phlyctenæ appear is of a violet-red colour. In consequence of the rupture of the epidermis, greyish, pallid, atonic ulcers exist, which are sometimes of considerable size: they may become the starting-points of obstinate ulcers, and they often produce violent pain. It also less frequently happens—inasmuch as chilblains generally attack the fingers or the toes—that the natural folds in the vicinity of the articulations are deeply grooved by fissures, which become more or less serious complications in poor children engaged in manual labour. But the most frequent complication, as well as the most important, is undoubtedly gangrene. This complication occurs so frequently that it is considered as a species, and called gangrenous chilblain, which certain authors have confounded with the local effects of cold; thus bringing together two facts which are pathologically distinct. That is to say, phagedenic gangrene, complicating an ulcerated surface, and

the ulceration which establishes the line of demarcation between the parts dead from cold and those still possessing vitality.

We should carefully separate the prognosis and symptoms of chilblains from the local and general phenomena depending on intense cold. Thus it has been said, "Gangrenous chilblains are frequently accompanied by serious morbid phenomena, especially if the action of the cold be intense and prolonged, such as shivering, pallor, rigidity, torpor of the whole body, diminution of sensation, of motion, and of animal heat, retardation of the circulation, precordial anxiety, stupor followed by death." These are not the symptoms depending on the disease of which we are now treating, but rather of the intensely depressing action of cold too intense or too long continued.

With regard to the gangrenous complication, we have endeavoured to show the importance which phagedenic gangrene has in infancy. We have described its characters, which are always the same. We have pointed it out as complicating the greater number of ulcers, of whatever kind they may be, in *cachectic children*. But it is sufficient to recal here the clinical fact, that gangrenous chilblains appear only, as stated by all authors who mention them, in scrofulous children and in adults, exhausted by misery and disease.

We do not insist upon distinguishing gangrenous chilblain from the consecutive effects of local congelation. Although this disease is considered especially as a disease of infancy, it, nevertheless, attacks adults, and even some aged persons are occasionally attacked by it.

All infants are not attacked by chilblains; those of a lymphatic or scrofulous constitution are, in the opinion of all practitioners, much more exposed to it. It would be hardly judicious to assume a scrofulous constitution in a child from the mere presence of obstinate chilblain; but in

the generality of cases, this disposition to chilblains is concurrent with other manifestations of scrofula. We must add that in boarding schools, and families free from any trace of scrofula, young children of a lymphatic constitution are frequently found who suffer more or less severely from chilblains. In our opinion this cutaneous affection has generally no other signification than this—that it is the expression of a lymphatic temperament. Children who escape chilblains are usually either very vigorous, or else spare subjects. It is always, as BRIAND observed in 1783, upon a plump skin that chilblains appear. But if the general condition is in this, as in almost all diseases the predisposing cause, there must also be, concurrently, an efficient cause for the production of chilblains. As already stated, it is only observed in certain degrees of cold. When the cold mornings of autumn are felt in temperate climates, chilblains make their appearance, healing, in many children, only in the spring. Certain hot climates are, however, not exempt. MANGEL cites several cases observed in hot countries. They are frequently met with in Italy and other countries having a high temperature. It is, in fact, less in climates having a more or less high temperature which is nearly always equal, than in those where the degrees of cold and heat vary considerably, that chilblains are endemic; but in this respect there are considerable variations. A child residing in the country, whose skin is more accustomed to the influences of the seasons, must necessarily be less subject to this affection than the children of the rich, whose sensibility is so often protected to the injury of their health.

Chilblains may be traced to four principal causes: 1st. The general constitution; 2nd. Habit, or rather the mode of life; 3rd. The degree of cold; 4th. The concurrence of certain external local influences which act directly in their production.

The prognosis of this affection is not serious. Though it

is true that certain very delicate and nervous children are cruelly tormented by them, the greater number support them easily and without much inconvenience. The complication with gangrene is in itself a great danger, which owes all its importance to the impoverished state of the patient rather than to the cutaneous ulceration, which is then but the starting-point of asthenic gangrene.

SECTION III.—MOLLUSCOID ACNE.

Molluscum contagiosum (BATEMAN).—*Acné varioliforme* (BAZIN).

It is six years since we described a disease which is common among children, and which has, nevertheless, only slightly attracted the attention of physicians.

By a classification founded on anatomical lesions it has been arranged with some important and little known affections (tubercles). This inaccurate collocation has given rise to errors respecting it, so that it has been completely misunderstood by pathologists; as we may assure ourselves by reading the history of this curious disease.*

And yet there have for a long time existed in science all the materials necessary to furnish this cutaneous affection with characters as decided and well defined as those of the most common and best understood diseases.

We must at the outset remark that, in placing this malady among lymphatic diseases, we are far from asserting that it presents by itself the characters of the lymphatic temperament. We merely wish to express by it that we have mostly met with it in lymphatic children, and even in a great many who were scrofulous. It appears to us, on the contrary, true to say that it is in some respects an affection which may frequently be considered as a local fact, the existence of which can only be explained by contagion.

* *Archives de Médecine*, 1851. Fourth series, t. xxvii.

We reproduce here the result of our investigations made in 1851, concerning the variety of acne, which we have termed *molluscoid acne*, passing by the other form called *acne pendulum*, which is only met with in adults and old persons.

We would observe that, in children, the various forms of acne never present themselves, with the exception of that which we are now describing; on the contrary, *acne simplex* is very frequent in adolescence, and *acne rosacea* is generally only seen in the adult.

There exists somewhat frequently in children a cutaneous affection, having by preference its seat upon the face and the neck, characterised by small tumours of a tubercular aspect.

At first sight they might be confounded with verrucose excrescences, but on a closer examination we find that they present—the normal colour of the skin, an opaline semi-transparent appearance, sometimes a very slight and very fine vascularity at their base, and nearly always a resistance to pressure.

Their volume varies from the size of a millet-seed to that of a pea, they are sessile, some of are them acuminate, others, bulged out at the top, may be compared to those fungi, the short and thick stem of which is surmounted by a globular head. But their chief and truly pathognomonic character, which is never absent, is that they present either at the apex of the tumour, or on one of the sides, an orifice more or less widely open, from which issues spontaneously, or by pressure, a liquid, sometimes exactly resembling milk in appearance, at others similar to ordinary sebaceous matter.

This orifice must not be considered as appearing upon these tumours at given times only; it is, on the contrary, permanent and visible from the first appearance to the disappearance of the hypertrophied follicle. We must insist upon its presence, which is never doubtful, because in connecting this fact with the existence of sebaceous matter in it,

which is equally constant, we have an important character, enabling us to refer this affection to the genus acne.

These tumours usually appear at first as small papulæ, scarcely visible and increasing very slowly. As soon as they are perceptible to the touch an examination by a lens will exhibit the central orifice. Slowly progressing they attain successively the dimensions of a millet-seed or of a hemp-seed, at length they may attain the size of a pea, and even that of a small nut. It may be easily conceived that in the progress of each of these tumours, which may last for many months, they assume a variety of aspects and shapes. Thus, for instance, when they are as large as a small pin's head, they have a granulated and pearly appearance which is very remarkable. When, on the contrary, they attain the dimensions of a hemp-seed, they may be slightly flattened, and the central aperture becoming larger there results from it an umbilicated appearance, which may present occasionally some resemblance to the pustules of variola.

When these follicles attain large dimensions, and are sessile, their slightly transparent appearance, their perfect continuity with the rest of the skin, and, finally, the tortuous vascularity which is developed at their base, are characters in which they resemble large tubercles, and so much the more accurately, inasmuch as, when these tumours have arrived at what may be called their maturity, a slight inflammatory action is generally produced, which we shall minutely describe in treating of the spontaneous cure of this variety of acne. Nevertheless, we must here say a few words concerning the constant inflammatory condition during the progress of the evolution of the distended follicles.

When these pisiform and more or less elongated tumours have arrived at maturity, or when some fortuitous cause excites in them a sufficient degree of inflammation, the central orifice becomes widened, at the same time there

flows from it a liquid, which is at first lactescent, then sero-purulent, and containing clots of concrete sebaceous matter. The walls of the follicles are red externally, and become the seat of a slight itching, and its margins which sometimes curl towards the centre, permit the escape of blood on the least friction, which mixing with the sebaceous matter, forms blackish crusts. When these fall off, large ulcers, with a grey and dirty base, are seen, the borders of which are sometimes much elevated and generally perpendicular. This ulcerated state may continue for a long time, and if the tumours are upon the face they present a hideous aspect. If cases of this kind occurred independently of any other tumour, at a less advanced period of its evolution, they might seriously embarrass the diagnosis. They have, in fact, at first sight, the appearance of large tuberculous masses about to suppurate. When these ulcers persist, for a certain time, the lymphatic glands, corresponding to the regions affected, are seen to be the seat of a swelling which is easily accounted for. Sometimes the border of these ulcers are intersected by deep fissures, so that they might be taken for warts, the papillæ of which had separated from each other at the apex.

The progress of these tumours examined separately is very variable; to such a degree, in fact, that if we examine two of them, which have appeared simultaneously, and trace their progress from day to day, or rather from week to week, it may happen that one of them may attain the dimensions of a large pea in the course of one or two months, whilst the other having acquired the size of a hemp-seed may remain pellucid and transparent, resembling a vesicle of varicella, for some months, until, resuming its progress, it slowly arrives at maturity, or it undergoes spontaneously, or from some accidental cause, an inflammatory action which leads to a radical cure.

This cutaneous disease being, in fact, constituted by successive crops of these tumours, more or less confluent, it follows that its progress must be essentially chronic. In one of the cases related by BATEMAN tumours of this kind appeared, and were cured in succession during twelve months, until curative remedies were resorted to.

I had a little girl under my care in 1852 who had been disfigured by this disease for more than seven months. Its duration is frequently shorter; thus a number of these follicles may become altered, and heal spontaneously within three or four months. There exist also great differences in respect to the numbers of these tumours. In many infants their number is insignificant, amounting to about a dozen, scattered here and there, while in others it is difficult to count them, as one or several regions of the body may be covered with them. But whatever may be their number they constantly offer this peculiarity, that in consequence of their slow progress and duration there are always some in different periods of their evolution, so that they can be simultaneously studied in their various phases.

These tumours present themselves in groups of three, four, six, or more. This character had not escaped BATEMAN. Their seat is wherever a large number of sebaceous follicles exist, as about the natural orifices, viz.: the eyelids, the mouth, the nose; moreover, the neck, the back, the chest, the scrotum, the circumference of the nipple, may also be selected in preference by this follicular affection.

The spontaneous cure of these tumours is affected in three different modes; these are: 1st. By inflammation of the follicles; 2nd. By the atrophy or ulceration of the pedicle; 3rd. By the gradual transition of the form we have just described into that called *molluscum pendulum* (the last mode is very exceptional).

A.—We have seen that in the first mode inflammation

may spontaneously, or accidentally, develop itself in the parieties of the little cyst, which then becomes sensitive, and sometimes even very painful under pressure. At the same time the orifice enlarges, and sometimes the follicle, which appears to be too full of sebaceous matter, seems to be ruptured by internal pressure.

The sebaceous matter, opaque, granular, and mixed with blood, which escapes from the margins of the orifice, forms large crusts, which, after their fall, leave rounded sanious ulcers, resembling somewhat those of cachectic ecthyma, but differing from them by this prominent character, that those of ecthyma are situated in the thickness of the dermis itself, while these are, on the contrary, situated upon the apex of an elevation more or less considerable. After a certain period of suppuration, the pus being mixed with clots of sebaceous matter, the slight inflammation subsides, the edges flatten, the base unites insensibly with the rest of the skin, and after the fall of the last crust we find a red, perfectly even cicatrised surface. If the inflammation has been slight and if the whole of this process has proceeded rapidly, the seat of the cicatrix, after the disappearance of its rosy tint, does not present any trace of the existence of an ulcer. But if the ulceration has taken place in a large tumour, the thick and well defined edges of which are very widely separated, the interior of the follicles having undergone an active inflammation, and the thickness of the whole skin having participated in the process of expulsion, there results from it an indelible cicatrix, resembling much that of the cow-pox. These cicatrices are generally round, and slightly depressed, with well defined borders. When they become old the surface is of a dull white colour, having a wrinkled and rough aspect, which distinguish it from the rest of the skin.

We ought to remark that these kinds of cicatrices are

rare, and that they only show themselves when the inflammatory process has been considerable, and has existed upon parts of the body where the skin is thick and tense.

This mode of cure most frequently occurs in the sessile follicles, and in those in which there is a tolerably active secretion of sebaceous matter, the latter favours remarkably the development of the slight inflammatory action necessary for a spontaneous cure, and ought, consequently, to render their duration less than that of the follicles, the secretion of which is less active.

B.—By atrophy or ulceration of the pedicle. When the tumours have the form we have endeavoured to describe, viz., globular, they frequently present a kind of furrow which separates them from the rest of the skin, from which it results that when the swelled part enlarges, the furrow becomes deeper, and the neck of the tumour narrower, so that the pedicle, which is very short, is necessarily subjected to some traction through the medium of the tumour; then the skin in the deepened and narrow sulcus gradually assumes a mucous character, it becomes the seat of an abundant secretion, and either by a spontaneous ulceration in the circular furrow, or by a slight rupture of the pedicle, it always happens that tumours of this kind, when they have attained the size of a pea, are thus completely separated from the rest of the skin. We may observe them become brown in colour, and at the same time they exhibit an abnormal mobility, until the slightest traction completely detaches them. When separated in this manner they are usually reduced to small dry masses, half of them consisting of crusts, in the centre of which is a large nucleus of sebaceous matter. On the seat of the pedicle there is a small rosy cicatrix, which soon disappears without leaving any indelible trace.

C.—The third mode of cure is not, properly speaking, a true

cure, but rather a transformation. Thus certain tumours of medium size, after having remained for a long time unchanged, and without any frequent expulsion of sebaceous matter, become extremely soft, and are then generally corrugated or wrinkled under any external pressure. The sebaceous matter is reduced to a small central nucleus scarcely perceptible to the touch, while the orifice becomes so much contracted that it is difficult to distinguish it. The tumours are, in these cases, true inert cutaneous appendages, the existence and the duration of which appear to be subordinate to that of the individual. These follicles thus developed, and then blighted, bear the same relation to the preceding follicular tumour, as the *mariscæ* do to the hæmorrhoidal veins. Tumours of this kind are more frequently observed upon those parts of the body which are subject to the constant pressure of the dress, which circumstance may probably favour the development of this transformation. Whatever may be the explanation, it is, nevertheless, certain that this form of the disease may appear in parts of the body where no constant pressure exists.

It is rare not to find some flabby, wrinkled tumours upon the bodies of children who have a great number of the pustules of molluscoid acne.

The processes employed by nature for the spontaneous cure of this affection seem to be subordinate to the form and character of the tumours themselves; thus, for instance, those which are large and have a broad base do not disappear by the same process as those which have a short pedicle which it is easy to break.

The diagnosis of this variety of acne can never offer any serious difficulties; nevertheless, the small tumours may be mistaken for warty vegetations, an error which is constantly committed. Warts may indeed have their form and

hardness, but they possess no central orifice from which sebaceous matter escapes, and they also differ essentially in colour. Warts have a yellowish tint, like horn, the transparency of which is more apparent than real, whilst the pustules of acne constantly present a very remarkable opaline tint, which is owing to the presence of the lactescent liquid or to the fatty matter which distends them. When this variety appears in the face, either in a discrete form, or in the shape of pellucid, regularly hemispherical pustules, some of which may be more or less umbilicated, it easily leads to the belief in the existence of varioloid, or rather of that species of varicella with small vesicles called "chicken-pox" by the English; but the absence of constitutional disturbance and the duration of the disease leave no room for doubt. In cases where the eruption is confluent and attains a considerable development, with the tumours slightly ulcerated, the diagnosis is still easy. We find the sebaceous follicular matter in the centre of the cavity, and besides, on examining the rest of the body, these excoriations will also be met with in less advanced and characteristic stages.

This cutaneous affection cannot be mistaken for any variety of the genus acne.

We shall not speak of the differential diagnosis between these tumours and those which have been described under the name of *chazax*; it is sufficient to mention it to avoid the possibility of error.

The *prognosis* of molluscoid acne is not serious, judging from numerous cases which have fallen under our own observation, as well as from facts related by English authors.

With regard to the prognosis we quote here verbatim the words of Dr. PATERSON, Physician to the Leith Dispensary, in a paper on the *molluscum contagiosum* of BATEMAN, published in 1841. He says—"The molluscum contagiosum appears not to be a disease of a dangerous nature—the case which CAZENAVE

and SCHEDEL relate, on the authority of Dr. CARSWELL, proved fatal; but whether from this disease or any other is not stated. The case which lately occurred in the Royal Infirmary, under the care of Dr. HENDERSON, proved fatal; but we believe that death did not take place from the cutaneous disease. All the other cases which have been recorded were of an extremely mild nature; and indeed, unless from the irritation of the tumours in the neighbourhood of the eyelids and mouth, giving rise to conjunctivitis and slight irritative fevers, the disease might be said to be one without even uneasiness. Sometimes, however, we find that the conjunctivitis proves very distressing. Professor THOMPSON informs me that the farmer's child, which has been previously mentioned in his second series of cases, ran great danger of losing its eyesight in consequence. Another annoying affection which has been mentioned by Dr. BATEMAN, and occurred to a considerable extent in Professor THOMPSON's and Dr. CARSWELL's case, was an enlargement of the glands in the neighbourhood of the eruption."

The affection appears to us to be of little importance. It causes, when it appears upon the face, a disagreeable inconvenience rather than a real disease.

When it is developed upon the limbs and the trunk, the patients do not complain more of it than of any other species of acne; it is only when the tumours ulcerate, and are subject to traction, that they become painful, but this is only for a short time.

The seat of this affection is evidently in the cutaneous follicles. It would not be correct to say that it is constituted by the inflammation of these follicles, for this plays but a secondary part in its production.

The follicles, in fact, under the influence of unknown causes, grow slowly, forming, by their unusual development, the tumours we have just described, and it is only occasionally

that a slight inflammation takes place to favour one of the modes of cure.

On examining the lactescent follicular liquid by the microscope, it is always found to be composed of numerous well developed nucleated epithelial cells, diffused in a large quantity of fatty matter.

In the concrete sebaceous matter we find an immense quantity of superposed epithelial cells, forming piles somewhat regularly arranged, or layers concentric with the walls. Besides the enormous numbers of regular epithelial cells, we also find a large quantity of the debris of these cells. The follicles, thus distended, appear to be formed as in the normal state, by an internal epithelial layer, and by an intermediate membrane without any peculiar character, and finally, by an external resisting cellular membrane. Blood vessels, more or less numerous, ramify upon the walls, and furnish these rudimentary glands with the elements of their secretion. When one of these follicles is removed entirely, a cavity, more or less large, is left in the thickness of the dermis, according to the volume of the hypertrophied follicle: this is disposed exactly in the form of a little cyst, which by its development seems to have displaced the fibres constituting the dermis.

The follicles removed from the skin, resemble small ampullæ with a single constricted neck, having some dilations in their wide part, which call to mind exactly the lobules of compound glands of a higher rank in the order of physiological glandular functions.

These micrographic details have been frequently verified by my excellent friend, DUFOUR; they are exactly identical with those represented in the plates annexed to the papers of Messrs. PATERSON and HENDERSON, the correctness of which may be easily verified.

Connecting the superabundant secretion of these follicles

with the distension which always accompanies them, and adopting with WILLAN a classification founded upon external forms and elementary lesions, it will be evident that this affection must be classed with other varieties of the genus acne. It is true that by the word acne is understood a pustular eruption, and there are, properly speaking, no pustules in this affection; but the identity of the seat, and of the lesion, justify us in referring it to acne. Moreover, the transgression of the definition can only be imputed to the restriction of the definition itself, which cannot embrace every clinical species, such, for instance, as *acne punctata*, *acne sebacea*, and the two species we have described.

From birth up to puberty, children, though subject to nearly all cutaneous affections, *scarcely ever present the common varieties of acne*, whilst the follicular species under consideration seems in some sort peculiar to infancy.

Infancy, and feeble constitutions lymphatic or scrofulous, appear to be the occasioning causes of it.

The colour and the thickness of the cutaneous system do not appear to exercise any influence over the production of this disease.

Judging from the facts which have fallen under our observation, it would seem as if girls were more liable to be attacked by it than boys; but we attach no importance to statistics, which are necessarily incomplete. There is one cause of which we have not yet spoken, and which deserves the most serious examination, namely, *contagion*.

We freely confess that the first cases of molluscoid acne which came under our observation (in reference to which we may observe that we found only in BATEMAN's treatise a description which could with certainty be applied to them) induced us to find fault with the epithet, *contagious*, which that author had given the affection under consideration.

We would add that this doubt was confirmed by the

publication, some weeks after our researches, of a memoir, in which Dr. BAZIN, physician to the Hospital of St. Louis, described the *molluscum contagiosum* of BATEMAN, under the name of *acné varioliforme*, without mentioning its contagious character; he referred to a small number of cases it is true, but of these he gave exact descriptions.

This evidence appeared to us the less questionable as Dr. BAZIN had not perceived how perfectly his observations agreed with those of BATEMAN, in the first instance, and then in chronological order with those of PATERSON, THOMPSON, HENDERSON, CARSWELL, CRAIGIE, and WILLIS, and he, consequently, could not have been influenced in his investigations by the opinions of these competent practitioners.

But the attentive and continued study of many cases of mollusoid acne, which existed simultaneously in different wards of the Hospital for Children, compels us now to believe in the *possible contagion* of this disease, and induces us to retract our former opinion that the epithet of BATEMAN was erroneous.

Before reporting our own cases of contagion, we shall quote a passage, extracted from the paper of Dr. PATERSON, of Leith, in which he discusses the question of the contagion of *molluscum*, and of its exclusive presence in children; he says—

“This disease seems to be entirely British; no case of it having as yet been recorded, in so far as we are at present acquainted, in the records of any other country. It will, doubtless, however, be sooner or later noticed in other countries.

“It, however, appears also to be entirely an infantile disease; at least primarily, by which I mean that the first of a series of cases has always been an infant. The first case that Dr. BATEMAN saw, that of a young woman, received the contagion from a child affected with the disease, whom she nursed; two

other children of the same family were also affected with it. The second case was also that of an infant who had apparently got it from an older child who was in the habit of nursing it. The series of cases which CAZENAVE and SCHEDEL have related, and which occurred to Drs. CARSWELL and THOMSON, first appeared in a young boy, next upon a girl, and then the infant at the breast.

"The case which has been related on the authority of Professor THOMSON, and which occurred in the country, originally appeared in a child of one of the farm servants. This child communicated it to a child of the farmer's, it being thus conveyed by the most direct contact to the neck of the servant girl who kept the last-mentioned child.

"Dr. HENDERSON's case, where, I believe, he could not trace the contagion, also occurred in a child, and the two first series of cases which have been here related occurred to children. The first case appeared on a child and was communicated to the breast of the mother. The second case was communicated to the child by an older child that nursed her. The third case which I have related cannot be adduced either in evidence for or against, as, from delicacy, it was impossible to gain any satisfactory information from the parties. We have every reason, therefore, for believing that it is a disease, if not entirely originating in children, as certainly most frequently originating in, and being communicated to children, and therefore to be looked upon as truly an infantile disease."

Of the numerous cases of this cutaneous affection which came under our own notice, we shall relate those which appear interesting with regard to the question of contagion.

When M. TARDIEU undertook the treatment of chronic diseases at the Hospital for Children, in the place of M. BOULEY, he found among those affected with diseases of the scalp in the ward of Saint Martha, a child, presenting large

and solid tubercles upon the face, neck, and shoulders, which attracted his attention. Dr. BLACHE, who had just resigned the charge of this ward to undertake the treatment of acute diseases, had already been struck by this form of cutaneous affection. After the lapse of a few days, similar cases presented themselves at the hospital. Having made some investigations on the subject, I immediately recognised the disease as the *molluscum contagiosum* of BATEMAN. From the few facts which I had observed, I, as already stated, doubted the contagious nature of the disease; and in order to assure myself whether the affection was really communicable, I observed attentively whether in the ward of Saint Martha, which contains but thirty patients, I might not find similar cases among the playfellows of this child. I ascertained positively that at this time there was but one case of *molluscum contagiosum*; I will describe the condition which this patient presented at the beginning of April, 1851:

CASE.—Leonie Juire, aged seven years, No. 23 in the ward of Saint Martha, entered the hospital February 22, 1850. She is rather small for her age, but yet strong and well formed; hair nut-brown, skin white and fine. She has upon the scalp at the posterior part of the head, a large ulcer which has the appearance of a scrofulous sore.

She has since her admission been under a tonic treatment, and has taken cod-liver oil.

The head nurse of the ward told us that since her admission she had several times been attacked by ophthalmia, which rendered her removal to another ward requisite. She also added that for about three months she has had large warts upon her face, which after continuing for a certain time, burst and then healed, after which new ones appeared. On examining the child I found upon the face eighteen tumours of different dimensions; the smallest scarcely as large as the head of a pin, the largest of the size of a large round pea. All the tumours have the normal colour of the skin; the larger ones have at their base numerous fine and sinuous blood vessels; most of them are sessile; some—contracted at their point of attachment, bear a great resemblance to the large calyciform papillæ of the tongue when they are hypertrophied. All of these have a central orifice more or less open, which allows the escape of a milky fluid, or of a white semi-concrete sebaceous matter.

The smallest tumours are like pearls, and very hard; on making an incision into them a milky liquid escapes. These tumours have generally a very remarkable opaline transparency; among the large tumours there are some the orifice of which, although quite visible, allows nothing to escape spontaneously, and upon the apex of them are seen white shining points, as if the internal white matter were ready to perforate the attenuated skin. They are generally indolent and solid; they are disposed in groups of three or four; the upper and lower eyelids on both sides contain a large number of them; some are situated very near their margins and appear to discharge the same function as hordeola do in relation to the palpebral mucous membrane. If we examine the eyes of the child a rather severe conjunctivitis is observed; the mucous membrane of each eyelid is of a deep red colour. There is well marked photophobia, and I had some difficulty in recognising the existence of some old specks on the cornea. One of the tumours, situated beneath the left lower eyelid, is large and somewhat flattened at the apex, which presents a sieve-like surface, from which clots of sebaceous matter mixed with blackish crusts issue. Upon the right upper eyelid there exists a large yellowish crust of about one centimeter in diameter, which appeared to cover the base of a tumour which has almost entirely disappeared. Upon the right shoulder, on a level with the spine of the scapula, is an isolated tumour of the size of a pea; it is perfectly round and transparent, with a central orifice, from which sebaceous matter escapes, which seems to have become filiform by its passage through the circular margins of the orifice. The health of the patient, with the exception of the sore upon the scalp and the conjunctivitis, is very good. She does not suffer much. I watched this case attentively almost daily during three months, and I observed at different times the modes of cure in the different forms of tumours. I watched the slow evolution of pustules, the origin of which I had observed; their progress was so slow that during this time some of them had not attained the size of a small hemp-seed. Nevertheless, I have witnessed the complete disappearance of some of the larger ones, which, in proportion as they increase in size, become gradually more vascular, and assume a rosy colour, until inflammation is established, which soon terminates in a radical cure.

Whilst I thus traced the development and progress of the disease, I was much surprised to see a precisely similar eruption appear successively in other children in the ward; so that within three months fourteen little girls out of thirty presented a more or less considerable number of tumours exactly similar to those of the child in No. 23.

I now hear the head nurse scold without ceasing the little patients who are about to play with the children having these *warts*, as she calls them, because she says they are so *catching*.

Certain it is that at this time one-half of the patients of the ward are affected with this cutaneous disease, with this peculiarity in favour of contagion, that the whole of these follicular tumours are seated only on the uncovered parts, as the face and the neck, which are always exposed to external contact.

The first child who exhibited this cutaneous affection after the little girl in No. 23, was the youngest in the ward; she was often attended to by the former, who was obliged to remain in the ward on account of ophthalmia, whilst the rest of the children were at play in the courts.

New cases of this disease appeared successively, which enabled us to observe the commencement as well as the slow progress of the affection.

From the nature of the diseases which are treated in the ward of Saint Martha, the succession of patients is slow: we have only to bear in mind the duration and obstinate tenacity of diseases of the scalp, to understand that the children had to remain there a considerable time. Since our attention has been drawn to the subject, I can affirm that no new cases of this kind have been admitted; and we have already stated that as soon as we perceived that our patient was affected with the *molluscum contagiosum* of BATEMAN, a strict examination of all the patients showed that there was no other case of the kind in the ward. I have successively collected fourteen cases, which I shall not describe, for fear of exceeding the limits of this work; their details are, moreover, perfectly identical, and would only offer useless repetitions.

As the new cases became more numerous in the ward, we

had reason to expect that others would occur, judging from the number that had appeared during the last month. In the ward of St. Mary, containing scrofulous girls exclusively, an isolated case occurred similar to those we have just mentioned. Eugénie Amand, aged seven years and a half, in No. 17, has caries of several metacarpal bones; she is very lively and alert, and has had for some time upon her face a dozen follicular tumours of molluscoid acne, pellucid and hard. Close to this child, in No. 18, is the bed of a patient, aged twelve years, who constantly keeps her bed in consequence of a white swelling at the knee, and who is assisted in her amusements and daily occupation by her young neighbour. Either from coincidence or contagion, the child in No. 18 has at this time a single tumour of molluscoid acne with its characteristic form upon the right cheek.

CASE.—Mlle. Félicie X——, Rue Laborde, aged fourteen years, has for nearly six months had thirty tubercles of molluscoid acne upon the neck and face; they have been more numerous, but many have disappeared after a slight inflammation, without leaving any apparent cicatrices. The brother of this young girl is eighteen years of age; he has had on his face, for a longer time than his sister, some tumours exactly similar to hers. The family believed them to be warts, and thought that they were communicated by means of towels which the brother and sister used in common.

Dr. R. PATERSON, of Leith, in his summary of cases of *molluscum contagiosum*, published in 1841, though decidedly in favour of contagion, observes that he had several times attempted to inoculate the disease by transferring the lactescent liquid to a healthy skin, and that he had tried this experiment on himself, but without any success.

Dr. HENDERSON, Professor of Pathology in the Royal Infirmary of Edinburgh, printed at the same period the following remarks: "It is very probable, as BATEMAN has suggested, that the atheromatous secretion is the means by which the disease is propagated, yet inoculation with it in

the ordinary way has not succeeded in the hands of Dr. PATERSON or in mine. If we are to consider the disease as peculiar to the follicles, it is easily understood how simple inoculation, without attention to the precise point at which the matter is inserted, so as to insure its contact with a follicle, should fail in propagating the tubercles."

In considering in, their totality the facts observed in England, which all show the possibility of contagion, and also those which we have related, it appears to us that they demand the serious attention of practitioners; at the same time they do not permit us to tax BATEMAN or the intelligent authors whom we have quoted with having expressed an inconsiderate opinion. It may appear strange to find that one variety of acne is contagious while others are absolutely intransmissible. But is not this also the case, as CAZENAVE has so well shown, in the variety of herpes, called *herpes tonsurans*? Eczema of the genitals was considered to be contagious by BIETT. Does not a similar circumstance occur with regard to certain varieties of ophthalmia, and not with regard to others, just as with some affections of the mouth, &c.? The phenomenon of contagion in this variety of follicular disease, however strange it may appear at first sight, must not be rejected before a rigorous investigation has decided the question.*

* The evidence already existing appears to us to be amply sufficient to place the contagious nature of this disease beyond a doubt.

In addition to the important cases, in reference to this question, which are related in the text, we would direct particular attention to the two following cases, related respectively by Dr. PATERSON and M. HARDY.

In Dr. PATERSON'S case a child eighteen months old was affected with this disease, in a well marked form, on the face. The mother nursed this child on one breast, and about six weeks after the appearance of the disease on the child, this breast was attacked by it, and it was entirely confined to the sebaceous glands around the nipple.—(*Edinburgh Medical and Surgical Journal*, vol. lvi, p. 281.)

The case related by M. HARDY is the converse of the preceding one, it is that of a nurse who had four or five tumours of molluscum on her breast. The child that she suckled presented similar tumours on those parts of its

Besides the cases we have reported, we are bound to say that we have collected a considerable number in which contagion evidently played no part. Thus we have now under our care many children suffering from molluscoid acne for many months, without having communicated the disease to their brothers or sisters with whom they have constantly associated.

In considering the contagious nature of the disease, we cannot refrain from instituting a comparison between *molluscum contagiosum*, and the *herpes tonsurans* of CAZENAVE.

If the contagion of this follicular disease should be ultimately as fully established as it is for *herpes tonsurans*, it ought, necessarily, to act in a similar manner in each of these diseases.

It may be affirmed, that *herpes tonsurans* is, in Paris, almost a new affection, as M. CAZENAVE has shown. It is very true that some years ago it was rare in the Hospital for Children, and, during the three years that I was attached to that institution, I was able to ascertain, especially in the year 1847, the rarity of *herpes tonsurans* as compared to its frequency during the current year; it must now be considered as one of the most prevalent diseases of the scalp, propagating itself with a rapidity truly surprising. I have lately seen thirty boys of one boarding school of the Rue

face which came into contact with the diseased breast.—(*Leçons sur les Maladies de la Peau. Deux. partie, p. 98.*)

M. HARDY states that he has discovered the spores of a cryptogamic plant in the contents of these tumours, by the propagation of which he explains the contagious nature of the disease: so far as we are aware this important observation has not been confirmed by any other observers. If it should be established, molluscum must be classed with parasitical diseases.

We are so imperfectly acquainted with the conditions under which this disease is spontaneously propagated, that we can attach but little importance to the undoubted fact that some children who are affected with it may associate with others without communicating it to them; for the same reason we think that the failure of all attempts to propagate it by direct inoculation are of but little value in enabling us to form an accurate opinion as to its contagious nature.—(ED.)

Vaugirard brought to the hospital, all of whom were attacked within a short time by *herpes tonsurans*.

It is just possible that a similar circumstance may happen in the affection now under discussion.

Be this as it may, we have pointed out its frequency and its salient characters, and we hope that unprejudiced investigations will, before long, decide the question of contagion, which it is always so important to be acquainted with.

We may add that, besides the eighteen cases we have reported, in which contagion seems to have played a certain part, we have observed thirty others, at the hospital and elsewhere, in which the contagious character has hitherto, at least, not been appreciable.

Though the number of cases of this curious affection we have described amounts already to forty-eight, it does not represent all the cases which have come under our notice; of some we have not preserved any notes, and we have seen many cases in a boarding school which are not enumerated here.

TREATMENT OF LYMPHATIC DISEASES.

Cutaneous affections depending on the predominance of a lymphatic constitution do not exhibit a great resemblance among themselves, they present on the contrary some constant differences even from a therapeutic point of view. The end to be attained is, however, the same in all of them; it is to strengthen all the organs, and to regulate their functions. This is to be accomplished chiefly by means of regimen, aided by chalybeates, cold affusions, and exercise in the open air. The affections belonging to this group require special remedies, differing from each other according to the nature of the disease. We shall, therefore, give their treatment separately.

A.—Treatment of Achores.—The indication to cure, or at

least to modify aches, being assumed, what are the most efficacious and the most frequently applied remedies?

The sympathetic connexion between the cutaneous system and the rest of the organism, as also the abundance of the discharge, show, as we have said, that the latter must not be completely suppressed before we have previously modified the natural secretions. It is, in nearly all cases, useful to increase the energy of one or more functions. The intimate relation between the skin and the kidneys renders the exhibition of diuretics frequently imperative. It has been long known that these agents diminish what the older physicians called the efflorescence of *crusta lactea*. Some practitioners prefer acting upon the intestinal secretion by the exhibition of small quantities of magnesia.

We should confine ourselves to these remedies, as regards internal treatment, which formerly played a considerable part in the cure of this disease. When this affection arises from the milk being too nourishing, or from the voracity of the child, with that general condition called serous plethora, the nurse must be changed, or if that be not feasible, the quantity of milk must be gradually diminished. The child should pass the greater part of the day in the open air, in order to increase the cutaneous transpiration. The diet, after weaning, must be very regular and not too abundant; exercise and great cleanliness are the necessary adjuvants to every kind of treatment. The local treatment consists chiefly in topical applications to moderate the painful itchings of the scalp and face. In order to avoid them as much as possible, emollient lotions and cataplasms too long continued should be avoided, as they produce a useless maceration which is often very injurious. The lotions should be made with pure tepid water, to which a little soap may be added, if there be no fear of too rapid a desiccation. The lotions are frequently made with the milk of the nurse, which she obtains from the breast.

We should not generally confine ourselves to a single remedy, it is better to change the lotions; but in any case we should avoid all greasy applications, such as pomade, butter, oil, &c., all these substances are inconvenient from the facility with which they become rancid. Vesication was formerly much recommended in order to remove the morbid secretion. But it is well known that at a tender age blisters produce considerable pain; a moderate and continued action upon the renal or intestinal secretion is much to be preferred. Vesication will, however, be found very useful in the case of the sudden and injurious arrest of an abundant secretion. Anodyne lotions of belladonna to assuage itching ought to be rejected as dangerous. M. CAZENAVE, agreeing in this with all mothers, advises the powdering of the parts affected, whether excoriated or not, with an impalpable powder of starch, lycopodium, or rice; this being the best means of moderating the itchings, which are so frequently the cause of agitation, difficult to appease, in infants. Sulphurous lotions should, in our opinion, be reserved for cases in which the achores have a tendency to be transformed into dartsous affections as eczema or lichen. They have a curative action which is so much the more energetic as the achores begin to lose their peculiar characters.

Mothers and nurses have a habit against which the physician is frequently called upon to protest. They are generally disposed to use warm baths frequently in the course of the disease: this is not without inconvenience, as it tends to enfeeble the patients and to render them more sensitive and delicate. Without rejecting baths altogether, they should be very short in duration, and rendered emollient with bran and gelatine, while the temperature should be very moderate.

B.—Treatment of Chilblain. As in most diseases in which therapeutics are nearly powerless, there exists a very long list

of remedies for the cure of chilblain. This pharmaceutical wealth conceals, in fact, in the majority of cases, a real poverty of efficacious agents.

We should, at first, try to prevent the formation of chilblains, and in case of failure, endeavour to cure them radically. We know that they are *most frequently* under the dependence of the three following circumstances: 1st. A special sensibility of the skin; 2nd. A constitutional disposition apparently corresponding to the lymphatic temperament; 3rd. Alternations of cold and heat. Hence, to prevent them, we must try to harden the skin, to oppose the lymphatic constitution, and finally to avoid sudden changes of heat and cold. The skin may be strengthened or rather hardened by lotions containing solutions of alum, or decoctions of oak bark, &c. One of the most energetic means consists in using cold ablutions morning and evening, some time before the cool evenings of autumn set in; the skin thus acquires a greater vitality, which is frequently sufficient to destroy a feeble tendency to chilblain. A favourable modification of a lymphatic constitution may be effected by hygienic remedies, aided by gymnastic exercises, hydrotherapia, &c. With regard to the precautions for the avoidance of sudden alterations of temperature the remedies proposed differ. Some authors think that the end may be obtained by hardening the skin, and thus seasoning it against extremes, or by blunting, so to speak, its sensibility, by the avoidance of gloves, muffs, &c., and everything that can protect the hands. Others, on the contrary, recommend the judicious use of these protectors, with the view of fortifying the patient against intense cold, thus escaping extremes of temperature.

When the affection is characterised by a simple redness of the skin and a slight swelling of the subcutaneous tissue, embrocations of oil of turpentine, or of camphorated spirits of wine may be recommended; compresses soaked in GOULARD

water may also be employed. The exposure of the part affected to as great a heat as can be supported, is a very ancient remedy, but despite of its efficacy it is frequently impossible to apply it to children, on account of the great pain it causes. The application of heat by a less painful method has been much vaunted, it consists in the use of small bags containing hot cinders, applied to non-ulcerated chilblains. TISSOT, on the contrary, advises the application of intense cold, such as rubbing the part affected with snow. This remedy is as little applicable in children as the preceding. The most reliable means are embrocations with decoction of oak bark, the skin having been previously rubbed with a spirit lotion.

It sometimes happens that the hands of young girls attacked by partial and slight chilblains present a very red colour of all the other parts, even where there is no trace of the affection. In such cases, emollients produce scarcely any effect. Washing the hands in the water of Barèges, aided by stimulant frictions, frequently succeed in counteracting this condition which is more inconvenient than painful. When the chilblains begin to ulcerate, we are sometimes obliged to have recourse to poultices, but they must not be too long continued. The nitrate of silver is frequently required to give to the consecutive pale and indolent sores a more healthy aspect, and to favour their cicatrisation. We have seen TARDIEU apply with advantage the following ointment in cases of non-ulcerated chilblain.

Nitrate of Silver	1 gramme.
Lard	30 „

Dr. RATIER has obtained satisfactory results from the employment of mercurial unctions. He applies them in this manner: the mercurial ointment is very thinly spread upon the parts attacked. Twenty-four hours afterwards, the skin is wrinkled, and the cedema and the erysipelalous inflammation have generally disappeared.

Dr. JANNYOT has proposed a liquid which should be applied as soon as the itching indicates the appearance of chilblains, for if the disease has arrived at the ulcerative stage it is no longer suitable. The hands and feet should be plunged into the solution for half an hour, two or three times only.

R. Oak bark	50 grammes
Alum	30 "
Red wine, or common water	5000 "

Reduce it to two-thirds by boiling; afterwards, add the alum which then easily dissolves.

C.—Treatment of molluscoid acne.—The tumours of molluscoid acne peculiar to infancy must, according to their form, be cut off, or strangled by a ligature. The globular tumours should be opened with the point of a lancet, and cauterisation of the cavity of the follicle, with a pencil of nitrate of silver, will produce an inflammation sufficient to lead to a radical cure. We shall not mention any general remedies. BATEMAN prescribed arsenical preparations in one case; Dr. PATERSON rejected them after one trial. This medicine appears to us, to say the least of it, useless. The most rational treatment consists in the use of tonics and other strengthening means, the majority of children affected, being, as indicated by the classification of this affection, of a flabby and lymphatic constitution.*

* No reliance whatever can be placed on the use of internal remedies in the cure of this disease. The treatment should be purely local; it may consist:

- 1.—In the simple removal of the tumour by the knife or scissors.
- 2.—In the incision of the apex of the tumour by means of a fine lancet, and the evacuation of the contents of the follicle by pressure.
- 3.—In the destruction of the tumour by escharotics; of these the sulphate of copper, caustic potash, or the acid nitrate of mercury are to be preferred.
- 4.—In the application of irritant lotions or ointments, with a view of exciting suppuration in the follicle, lotions of the bichloride or bichloride of mercury, and ointments containing the iodide of sulphur, or the iodide of mercury will answer very well.
- 5.—In the application of astringent lotions, such as a solution of alum or decoction of oak bark, for the purpose of exciting the contractibility of the follicle, and enabling it to expel its sebaceous contents. — (Ed.)

FOURTH CLASS.—SCROFULOUS DISEASES.

Scrofula is a constitutional disease characterised by the development of a number of symptoms upon different parts of the body, the principal of which are: glandular tumours, catarrhal affections, ophthalmia, certain cutaneous diseases, chronic abscesses, tumours, osseous affections, &c.

In studying the course of the disease in relation to age, we find that the various lesions have distinct symptomatic expressions. Thus, for instance, it is difficult to find a child under two years of age with scrofulous affections of the osseous system, however bad its hereditary or hygienic condition may be. The first appearance of scrofula belongs essentially to the second period of infancy. It generally commences by chronic impetigo on certain regions, chronic inflammation of the mucous membranes, ophthalmia, coryza, otorrhœa, leucorrhœa, or cutaneous abscesses. When the disease takes its usual course, osseous affections supervene at a later period, succeeding most frequently to chronic articular effusions. We think that there is too great a tendency to consider osseous affections, of whatever kind they may be, as scrofulous in children, who are just emerging from the first period of infancy. If at that age osteitis or articular effusion cause great pain, and require absolute repose, the former affections may become a cause of scrofula, acquired by want of exercise, and the state of health which is the necessary consequence of it.

It is chiefly among the population of large towns that we have opportunities of tracing the connection among the pathological facts of scrofula. We frequently find whole

families scrofulous, and plunged in misery, the children exhibiting the different degree of scrofula, from its first manifestation to its highest development.

All these various lesions have a symptomatic value in reference to scrofula, inasmuch as they have a remarkably chronic character, and a certain connection amongst themselves; for it is a sound clinical observation that many of these local lesions may exist isolated as *essential* diseases; that is to say, that they may show themselves irrespective of any generally morbid condition influencing their appearance and production.

CULLEN and KORTUM have remarked that scrofulous symptoms most frequently make their appearance between the third and seventh year, sometimes, however, not until the age of puberty; and if it be true that it is sometimes possible to foretell the development of a scrofulous diathesis in a young subject, during the first period of infancy, it is only by the general condition of the patient, and not from any symptoms indicating the disease itself. Age has not merely a great influence over the development of scrofula, but also over the appearance of this or that scrofulous lesion, as we stated at the commencement of this section.

Most authors, ancient as well as modern, agree in admitting that this serious disease attacks in preference children of a flabby constitution, having a fine skin, a plump form, red cheeks, blue eyes with dilated pupils, fair hair, and a precocious intelligence; in other words, children presenting the aspect of a lymphatic constitution seem more subject to scrofulous diseases than those of any other temperament. However, nothing is more frequent than to find its different lesions in children whose dark skin and black hair offer characters as remote as possible from those which distinguish the lymphatic temperament.

THOMPSON, on the contrary, observes that the most serious

cases of scrofula which came under his notice were those of very dark coloured patients.

In scrofulous diseases the clinical observer may convince himself that he ought with reference to the cutaneous affections, as in other pathological states, to endeavour to connect their various forms with the conditions in which they are developed. J. P. FRANK* admitted the existence of chronic eruptions upon the mucous membranes, or *internal tetters*. This mode of viewing the manifestations of the same diathesis ought, in a medical point of view, to be applied as judiciously to the occurrence of cutaneous scrofulous lesions as to other chronic affections of the skin. It is on account of the pathogenic connection between all local scrofulous diseases that we have ranged in this class impetigo of the nose, the ears, &c., certain forms of ophthalmia, otorrhœa, leucorrhœa, coryza, &c., &c.

Among the great number of scrofulous symptoms we shall only describe such as present themselves directly upon the skin, or the mucous membrane, with identical pathological characters. Following the excellent description of Dr. RAYER† we shall describe cutaneous scrofula under the following heads:

- | | |
|-------------------------|--|
| 1st. Cutaneous Scrofula | { Cutaneous tubercles
Subcutaneous tubercles
Scrofulous ulcers |
| 2nd. Lupus | |
| 3rd. Impetigo | |

With regard to ophthalmia I shall borrow some remarks from the excellent treatise of my friend Dr. BECQUET.

* *Traité de Médecine Pratique*, traduit du Latin par GOUDAREAU. T. i, p. 354.

† *Traité des Maladies de la Peau*.

SECTION I.—CUTANEOUS TUBERCLES.

Under the influence of scrofulous disease, cutaneous tubercles develop themselves upon nearly every part of the body. They are, however, more frequently observed upon the face, the neck, and the arms. But when other affections of the same nature exist, such as abscesses, sinuses, &c., they appear by preference in their vicinity. They generally exist isolated, and are but rarely seen in groups.

On their first appearance in young subjects, towards the beginning of the second period of infancy, we may observe tubercles of a livid red colour commencing as red spots, without heat, pain, or itching.

On applying the finger to these patches, we perceive a small solid body embedded in the substance of the skin. In a month or more after its first appearance, the little spot becomes prominent, and acquires the characteristic tubercular form. In most cases these tubercles are no larger than a pea. In some cases they are of the size of an olive. If they increase in size at a later period, it is when they begin to soften. This softening, which is one of their principal characters, is effected very slowly. It may be recognised by the touch before the surface and the circumference of the tubercles appear to be inflamed, and a very long time before they are perforated. The softening usually commences in many points, however small the tubercles may be, sometimes each of these softened spots opens separately on the surface, and generally at different times. In such cases the form of the tubercles is irregular, presenting elevations and depressions, and sometimes a small recent perforation and a crust.

Under other circumstances either the softening after having commenced in the centre of the tubercles has extended itself successively to the whole mass, or after having commenced in several spots and formed a single abscess, the

whole surface becomes soft and fluctuating to the touch. Arrived at this stage of softening the tubercles may remain stationary for a long time. The skin which has become of a red and livid colour may remain for a long time without being softened or perforated. On making an incision into the tubercle a few drops of serous, rather than purulent, fluid flow from it. The opening remains fistulous for a considerable time; and when it becomes cicatrised, either spontaneously or from repeated cauterisation, there always or almost always remains a small, hard, and irregular nucleus in the affected spot. The process is nearly the same if the tubercle opens naturally within one or many years; the violet tint of the skin fades, but the induration does not disappear in the same degree. It is very rare that true ulcers succeed to the small tumours, which often appear in the vicinity of consecutive scrofulous ulcers, such as cold abscesses, or sinuses, resulting from osseous affections.

These cutaneous scrofulous tubercles may develop themselves in clusters more or less numerous, in which form they sometimes cover the external surface of the arm, the fore arm, the hand, and the fingers. The form and dimensions of these clusters vary considerably. They are generally not less than an inch in length, nor more than two or three in diameter. Tubercles thus agglomerated stand out in relief from the skin, forming mammillated patches, the violet-coloured surface of which is rather hard on the spots where the tubercles are not softened, but fluctuating and soft in other parts. When the fluid, resulting from the softening of the tubercles, is effused, their surface is moist, but it becomes covered with laminated crusts on the part where it has dried.

Whenever the constitution becomes considerably impaired from any cause, or if the chronic tubercular patches are irritated by want of cleanliness, or otherwise, their surface

becomes to a considerable extent soft and fungous, of a greyish-brown or of a reddish-violet colour. These surfaces are without any morbid heat, and almost painless; they are usually stained by a serous, yellowish, and sometimes sanguinolent exudation.

SECTION II.—SUBCUTANEOUS TUBERCLES.

Subcutaneous scrofulous tubercles are small, circumscribed tumours situated under the skin, and are developed not merely in the vicinity of glandular enlargements, but upon other parts of the body, and more frequently upon the arms than the legs. These tubercles are flatter and less moveable than lymphatic glands, whether hypertrophied, tubercular, or not, and are recognised at their first appearance by a small, circumscribed, lenticular hardness, situated under the skin, which is moveable over them, and unchanged in colour. These tubercles remain stationary for a long time in this primary state. They then commence gradually enlarging until they attain the size of a nut or of a small egg.

It is only at a considerably advanced period of their growth that the skin, which had hitherto preserved its natural mobility, becomes adherent to the centre of these tubercles, it is also at this point that at a still later period the skin becomes of a livid red colour. This redness subsequently spreads to the base of these little tumours, which are firm at first under the finger, and subsequently become soft. If an incision be made into them at that time, a greenish, serous fluid, thickened with whitish clots, is evacuated. In this latter case there probably exists in the vicinity or rather at the base of the tumour a tubercular lymphatic gland. When these tumours are left to themselves, the skin becomes attenuated in their centre, and an opening is established larger than that met with in scrofulous *cutaneous* tubercles. The skin separated nearly

to the base of the tumour is gradually destroyed, the perforation enlarges and becomes an ulcer.

SECTION III.—SCROFULOUS ULCERS.

Scrofulous ulcers are consecutive to cutaneous and sub-cutaneous tubercles, to the suppuration, tubercular or not, of the lymphatic glands, to caries and white swellings, to cold abscesses and scrofulous excoriated chilblains. They are generally of small extent, but it sometimes happens that they multiply and cover one or several regions of the body.

When they are very small, they succeed a single cutaneous tubercle, forming an ulcer of little depth, the violet-coloured and attenuated borders of which, approach towards the centre of it, thus simulating a cure; but these margins are separated from the adjacent parts to so great a degree as to form burrows where the muco-purulent matter is secreted. The whole cavity of the abscess is lined by a wall of a mucous or cutaneous character; it is sufficient to excise these margins, and to expose completely this new part, in order that its organisation may be perfected, or rather that it may, by contact with the external air, acquire more solidity and that a complete cure may be obtained. My venerable teacher, BAUDELOCQUE, attached great importance to this local treatment of scrofula. Often, indeed, the continuance of this kind of half-closed cavity in the substance of the dermis prevents the ulcers from healing. It also happens in ulcers of small dimensions, that portions of skin pass from one margin to the other; their action is analogous to that of the loose margins just described. Cutaneous bridges or strips of this kind coincide most frequently with a separation of the margins proportioned to the dimensions of the ulcers. The bottom of these scrofulous ulcers is often pallid, and does not present the granulations seen upon simple sores; some-

times it is even swollen as if it were œdematous. When they are consecutive to osseous caries, we may often distinguish the gaping apertures of fistulous orifices. The progress of these ulcers is essentially slow. They sometimes continue for several years, and progress imperceptibly.

All these ulcers possess one character in common which has long been familiar to all observers. It is the habitual absence of violent pain. Excepting the severe pain from articular affections, the numerous and varied lesions of scrofula do not generally cause so much pain as might be imagined from the severe disorders which they produce.

Whether the cure is effected spontaneously or by art it is accomplished very slowly. The surface of the ulcer becomes less pallid, the general health of the patient improves, the margins of the ulcer become less hard and livid, and the ulcer is covered with granulations. These ulcers have, moreover, a tendency to become partially cicatrised, which impresses on them a special character. Thus during their long continuance, notwithstanding an abundant suppuration, they frequently change their form. Sometimes prolongations of the cicatrices, sometimes bands or laminæ cover a portion of the ulcer, and simulate a cure; but there remains a fistulous opening which leads to an abscess. It also often occurs that whilst a normal cicatrix is forming upon one part of the ulcer, the margins of another part turn completely inwards, forming a sort of hem.

"The examination of a great number of scrofulous cicatrices," says BAUDELOCQUE,* "has enlightend me in regard to the mechanism of their formation and the cause of their deformity, which I believe it is always possible to prevent. Deformed scrofulous cicatrices are mostly caused by small superposed cicatrices, joined together. In attentively ex-

* *Etudes sur les Causes, la Nature, et le Traitement de la Maladie Scrofulouse.* Paris, 1834, p. 322.

amining them, we sometimes find one or more cutaneous bands adherent by their extremities but free in the rest of their extent, disposed altogether like the columnæ carneæ of the second species in the ventricles of the heart; sometimes these bands adhere in their whole length, as the columnæ carneæ of the heart of the third species; at other times one or several cicatrices may be found bent upon themselves, and strongly attached to a cicatrix more deeply situated; sometimes projecting portions, resembling vegetations, are implanted in the middle or on the sides of a large cicatrix.

They are only observed as the consequence of ulcers accompanied by a more or less considerable separation of the skin, and especially after ulcers resulting from suppurating glandular enlargements. Before the purulent collections which form in the glandular tumours are opened, either spontaneously or artificially, the skin which covers them becomes much attenuated, having been deprived of the cellular tissue which lines its internal surface; it frequently also acquires a livid violet tint; the skin thus denuded, attenuated, and altered in its structure, is but little apt to cicatrize, and, although the whole of the congestion has disappeared for a long time, and the bottom of the abscess seems disposed to unite with the skin, the union is not effected because the skin does not present the conditions requisite for adhesion."

"Hence the cicatrization of the bottom of the ulcer is isolated from that of its parieties. The bottom of the ulcer is covered with a cicatrix, and after a longer or shorter period of time the skin becomes cicatrized in its turn. In calling to mind the mechanism of the formation of cicatrices,—the traction exercised upon the adjoining parts, and the approximation of the granulations, we can easily comprehend how the skin free in one part doubles upon itself and becomes

attached to the cicatrix which covers the bottom of the ulcer; in this case there are two superimposed cicatrices. When the cicatrization instead of commencing in the bottom of the cavity commences at the skin, the latter rolling upon itself as in the first case, becomes attached to the ulcerated surface, whilst the vegetations extending beyond its level, encase it completely when they cicatrize. The bands are formed by portions of skin situated between two orifices, which, as they could neither unite with the subjacent parts nor with the skin, become cicatrized by themselves either before or after the other ulcerated parts, and they frequently acquire considerable thickness by rolling upon themselves.**

"There exists another form of scrofulous cicatrix, commonly called a seam. This depends upon the rapidity with which the granulations become elevated and cicatrized, when their growth has not been repressed as soon as they appear above the level of the skin. A thick layer of epidermic matter is often observed in the middle of them, which gives them their hardness." Whatever may be the mode in which these various scrofulous cicatrices have been formed, they remain for a long time red, glossy, unequal, and liable to rupture. The redness is gradually succeeded by a bluish tint; the surface becomes depressed, and the congested margins sometimes form irregular projections, which are a long time before they disappear. The bands of which we have spoken, often make them resemble the cicatrices of burns. It is only after many years that the indelible scrofulous cicatrices become white, and that their unequal prominences disappear. But as to the accidental cutaneous folds of the cicatrices and the bands resembling those of severe burns, they are never effaced.

* *Études sur les Causes, la Nature, et le Traitement de la Maladie Scrofuleuse*, p. 324.

SECTION IV.—LUPUS.

Certain authors consider lupus as the type of cutaneous scrofula; it may, in fact, alone indicate this disease. It would, however, be an error always so to judge, for lupus is often found in vigorous, plethoric subjects who have never presented any trace of scrofula. It is frequently coincident with other scrofulous lesions, when it must be considered as one of the numerous manifestations of scrofula, differing from the other cutaneous expressions of this disease, which leave no deep marks. In lupus, on the contrary, the skin is for years so profoundly altered that it never completely resumes its normal characters and aspect.

This terrible affection exhibits differences according to the situation it occupies. It is most frequently observed upon the face, nose, and cheeks. It is also frequently met with upon the limbs, neck, and trunk. Mr. HUGUIER has described, under the name of *esthiomène*, lupus of the vulva,* which need not detain us, inasmuch as there are no instances of lupus of the vulva having appeared before menstruation. The general characters of lupus are the same in the child as in the adult; they offer a great similitude, which is easily explained by the circumstance that the disease, though generally developed in infancy, continues to adult age without modifying its progress and its peculiar characters. The number of the varieties of lupus has been latterly increased, but we shall only describe three principal forms.

A.—Lupus, which affects the surface, is most frequently characterised by more or less voluminous, livid, irregular eminences, which are either isolated or collected in groups. These elevations, indolent in all their stages, are always slow and chronic in their progress. They do not ulcerate, but are the seat of an exfoliation, which continues for a longer or a

* *Mémoires de l'Académie de Médecine*, t. xvi.

shorter period, and one of the chief characters of this affection is, that after healing there always exist cicatrices indicating a partial destruction of the tissues affected. In this form, which presents several varieties, the parts concerned are destroyed solely by means of epidermic exfoliation.

The variety which may be considered as the most simple and mild is that which is sometimes seen in children at the breast. It generally appears as a red spot, almost always in the face. The spot preserves its deep redness and increases with remarkable slowness; by degrees it attains considerable dimensions as the infant grows and approaches towards the age of puberty. Sometimes, however, it remains perfectly stationary, causing neither inconvenience nor pain to the patient. On examining this tubercular nodosity, it is easy to detect a kind of induration involving the whole thickness of the dermis which serves it as a base. The violet tint of the darkened spot is in striking contrast with the rest of the skin, which seems to encase it, the more so as the dark red colour becomes deeper with age. When this form of lupus has attained its greatest dimensions, which is about that of a franc piece, or if any external irritant cause supervenes, the cutaneous eminence becomes inflamed, it increases in breadth, and is covered with small dry scales, which are renewed as soon as they are detached. The margins which form the boundaries of the disease advance towards the adjoining parts, whilst the centre plainly exhibits the aspect of cicatrices peculiar to lupus. This variety, the progress of which is so slow, ought to be treated by the application of caustics which are usually attended with perfect success.

In another phase the progress of tubercular lupus is modified, and it then deserves the name given to it by Biett, viz., *lupus which destroys the surface*. This variety commences

in the face by several disseminated tubercles, unattended by general or local disturbance. They may remain indolent and stationary for a long time; then thin greyish scales are formed, which fall off and are renewed indefinitely, until the skin becomes considerably altered by thinning and destruction, and the surface of the lupus is converted into a cicatrised tissue leaving indelible marks. These disorders are increased by the production of new tubercles in the vicinity, which have the same aspect and progress. It is thus that this variety of lupus may cover large surfaces. In the wards of the Hospital for Sick Children, there are constantly several cases of this distressing disease which have commenced in the face. The natural apertures of that region are deformed, and lupus sometimes covers the neck, shoulders, arms, and occasionally a more or less considerable part of the trunk. This disease leaves the most disfiguring lesions on the face. Thus it may invade the nasal fossæ, and destroy successively the alæ of the nose and the septum without any manifest ulceration being perceptible, as we have already stated. This slow destruction is effected by a kind of absorption of the degenerated tissue.

B.—In the ulcerative form of lupus, which penetrates deeply, the affected tissues are not destroyed by the same morbid process. The mode of destruction is by ulceration, which may remain superficial or act more or less deeply. We observe at the commencement the existence of tubercular cutaneous spots of a dark red colour, which are very slow in their progress. As the disease advances a slight diffused swelling is established in which the adjoining subcutaneous cellular tissue appears to be involved. The tubercles soon become inflamed; they soften at the top and ulceration supervenes. This may gradually extend to the surrounding tubercles, forming an irregular sanious sore, which is frequently covered with thick, unequal crusts adhering to the

circumference. This special alteration has this peculiarity, that wherever it occurs, it is replaced by characteristic cicatrices, whilst on another side ulceration attacks sound parts. In this form of superficial, ulcerative lupus, the disease may successively cover large cutaneous surfaces; when it encroaches upon the circumferences of the orifices of the face it causes horrible deformity. When lupus, in the latter form, progresses more rapidly and causes more destruction in the thickness of the dermis, it takes the name of deep ulcerative lupus. CAZENAVE has thus termed it, after having seen the ulceration, from some inappreciable cause, proceed with remarkable energy, extending with unusual rapidity, and making terrible progress within a very short time. This excellent author cites cases in which the whole of the nose has been thus destroyed in one or two weeks.

C.—Finally, the most severe kind of these various forms of lupus is unquestionably that which has been termed lupus with hypertrophy. It always commences on the face by flattened tubercles, soft and indolent, having a slow progress, the subjacent and adjoining skin becomes thickened and of a violet colour. As the disease advances the hypertrophy may assume considerable proportions, reminding us of the elephantiasis of the Greeks. The skin then presents a horrible aspect; the cheeks are enormously distended, the eye-lids puffed up, the nose and the ears thickened and deformed, the lips swollen and protuberant as in the negro. The tint of the altered skin is bluish, interspersed here and there with tubercles of a dark red colour, while upon other spots white patches exist, owing to the cicatrices which are formed upon certain parts. Upon a considerable portion of this surface there is always an abundant desquamation going on. Like the first varieties we have described this kind of lupus does not ulcerate. This form is much more serious, as it may

happen that by its progress the whole economy becomes profoundly affected, in which case the patients sink into a cachectic state and soon perish. At other times, on the contrary, either the constitution is improved or an attack of erysipelas supervenes and exercises a favourable influence, the hypertrophied surfaces become modified and a rapid process of resolution is effected leading to a complete cure.

We may observe in general with regard to the various species of lupus, that they present analogous cicatrices which it is important that the physician should be acquainted with. These are usually indelible; those which succeed the superficial forms have by all authors been compared to the cicatrices of burns. They are, in fact, rugous, unequal, and irregular. When they are yet very prominent above the level of the surrounding skin, the cure can scarcely be said to be certain, for the disease may reappear upon the cicatrized surfaces with its original energy. The cicatrices of serpiginous lupus, generally present a surface of a dark reddish tint, interspersed with inequalities formed by the wrinkles and lammelar fragments of the epidermis. The thickening of the skin disfigures the features: the eyelids are thickened, red, scaly, and often eroded or completely everted.

The seat of the lupus, as we have already stated, is not without its influence over the form it assumes. It has been observed that it effects great ravages in thin tissues possessing but little vascularity; hence it destroys so frequently the alæ of the nose, while its ravages are not so deep when it occupies the lips, cheeks, or limbs. It is only in the hypertrophied form, that "the microscope, according to LEBERT,* always shows the development of a certain quantity of fibro-plastic tissue; whilst in the other forms there are only found the normal elements of the dermis and epidermis, either hypertrophied, or mixed with the products

* *Traité des Maladies Scrofuleuses et Tuberculeuses.* Paris, 1849.

of inflammation, such as a more decided vascularity, or pus, with its globules intact upon the ulcers, but altered and desiccated in the crusts. These contain moreover epidermic scales, and sometimes the fibres of the dermis, which partly accounts for their resistance and adhesion."

SECTION V.—IMPETIGO.

Physicians who have almost exclusively confined their practice to the treatment of the diseases of children, admit that impetigo presents peculiarities in them which clearly distinguish it from that observed in the adult. We shall depart from the usual description given of it, as it gives rise to considerable confusion if we do not take into account the difference of age, even in the child. M. CAZENAVE has already shown that most of the descriptions of impetigo apply to *achor*, and *vice versa*. It is important for us to distinguish from each other the various cutaneous affections which have been confounded under the name of *Gourmes*. This expression has still in the opinion of a considerable number of physicians a generic sense exactly similar to that in which the word *teigne* was until recently used. The word "*gourme*," inasmuch as it represents an eruption which exercises a favourable influence in relation to the regularity of all the functions, might deservedly be retained, founded as it thus is upon a practical truth, which is too generally forgotten. But in its actual sense it leads to much confusion in diagnosis. We must recollect that in the numerous descriptions of the *teignes*, we find at every step the question discussed as to the importance of these diseases, as depuratory agents. The extension of these facts to all cutaneous diseases classed under this common name, is evidently false, but, nevertheless, it is founded upon a true practical datum which experience sometimes, but not always, verifies: for the affections hitherto comprehended under the name of *teigne*, were

most frequently serious diseases, much more injurious than useful. The confusion which for so many years existed in relation to the teignes, exists at present to a nearly equal degree with regard to "*gourmes*."

The guide which is to enable us to escape from this confusion is not to be sought for in the anatomo-pathological analysis of the constituent elements of every species of *gourme*, as has been the case in the teignes, but, on the contrary, in the continued study of cutaneous affections commencing with life and continued in the subsequent ages. We shall thus in the new-born infant observe, first, *crusta lactea*, then *achor*, and, if this cutaneous disease does not disappear, we may observe its transformation into affections of the same character. If the child is liable to cutaneous affections either by constitution or inheritance, the progress of the *achor* will be gradually modified. The young patient arrived at the second period of infancy will then exhibit either an obstinate lichenoid, or eczematous eruption, which it is very important should be cured. If, likewise, a nursling is, during lactation, covered with fluent *achores*, or, in other words, if an abundant *gourme* favours the regularity of the other functions, and if the infant is the issue of a scrofulous or enfeebled stock, the disease which it might have been injurious to arrest suddenly, will, the hygienic conditions persisting, be continued to the second period of infancy, and the child will then exhibit the characters of *scrofula* more or less perfectly. *Achores* are slowly converted into more or less fluent impetiginous affections. The transformation does not take place at once; there are temporary recoveries, and then relapses, which after weaning assume more and more the form of impetigo. It is to this latter species that we must refer what authors have described under the name of *persistent gourmes*. It is easily understood why certain forms of impetigo, despite of these symptomatic

differences, pass under the same name of *gourmes*. It is because these species of persistent *gourmes*, or rather this *impetigo*, exhibits a very remarkable tenacity; it localises itself by preference in certain regions, and becomes one of the numerous elements which concur in characterising *scrofula*, as we shall see in the sequel.

Impetigo, in the child as well as in the adult, is generally constituted by psyraceous pustules, slightly flattened, yellowish in colour, of moderate size, and usually confluent. At the commencement we may observe a certain degree of tension and redness of the skin where the pustules are about to appear. *Impetigo* may affect any part of the body, but it is by far the most frequently met with upon the face and the scalp. It is, in fact, in these two regions that it assumes such a form as to distinguish it from the disease as observed in the adult. Like most authors who have treated of *impetigo*, we shall describe the two principal species: *impetigo* of the scalp and *impetigo* of the face.

A.—Impetigo of the Scalp.—This affection usually commences with erythematous patches, violent itching, and sometimes tumefaction of the scalp; after which the characteristic pustules of *impetigo* are not long in making their appearance. These are acuminate, of a yellowish white colour, without any inflammatory areola; they are usually disseminated in small groups, and terminate their evolution within four or five days. They appear almost exclusively on the posterior and superior part of the head, rarely encroaching upon the forehead or the face. When the liquid of the pustules escapes, it rapidly solidifies, forming scabs which dry in a peculiar manner. They have in fact received the epithet *granulated*; they are irregular in shape, of a brownish colour, and extremely friable when they have attained a certain degree of dryness. These crusts form unequal masses, they are protuberant and rugous, and are compared by ALBERT

to the seeds of certain plants, to broken mortar, or to plaster detached from a wall, which has become dirty by moisture and dust. At times they are not thus agglomerated, but on the contrary scattered over the scalp, where they offer the curious appearance of being threaded by a hair like pearls strung upon a thread. This arrangement has been explained by the fact that the pustules are usually pierced by a hair, which, during its growth, isolates the little crust, and carries it along in its progressive elongation. Sometimes the impetiginous eruption of the scalp reminds us of achor by its humidity. A considerable exudation takes place from the surface, attended with a nauseous odour, which it is difficult to support. This is generally only a transitory phenomenon connected with the secretion, for in proportion as the scabs become dry and consistent, the odour diminishes, and the crusts assume a chalky appearance like gypsum. Beneath this mass of crusts it is common to see thousands of lice, the development of which is frequently favoured by want of cleanliness. Contrary to what takes place in achor, when, whatever may be the lesions of the scalp, there is never any persistent alopecia, it may happen that under the lapidescent crusts, as ALBERT called them, the piliferous bulbs become incurably atrophied; we must, however, add that this fact is so rare that it has been doubted.

Impetigo of the scalp, when of considerable extent, persists for a long time. If abandoned to itself it may continue for months and even for years. It is never observed during lactation and very rarely towards the end of the first period of infancy, on the contrary it is in some measure the disease of the scalp peculiar to the second period of infancy. It may also supervene in adolescence, and in adult age. All authors admit that this cutaneous affection has its cause in a lymphatic and scrofulous constitution aided by want of cleanliness. It frequently succeeds achor; hence the denomination of

gourmes, given by certain authors to impetigo of the scalp. Hence, also, the opinion that it should not be interfered with, by reason of its being a *gourmous* affection. It is impossible to confound the impetigo called granulated with achor, whatever may be the momentary resemblance which these two affections may assume. Achor presents soft yellow or greenish crusts, with a constant and considerable oozing. In impetigo, the crusts are usually black and dry; it is only occasionally that there is a more or less abundant secretion. Moreover the one affection is peculiar to the first, while the other only shows itself in the second period of infancy. The only disease which now and then renders the diagnosis difficult is *favus*; but we shall see that in this latter parasitical affection the yellowish, cup-shaped depressions and the characteristic odour will enable us to distinguish them.

B.—Impetigo of the Face.—In the face as well as in the scalp, this affection presents in its extremes two forms which differ considerably from each other. Thus the disorder may be limited to pustules, which suppurate, approximating to the characters proper to achor, and run through their evolutions in a rapid and acute form. In another form, the pustules may on the contrary be succeeded by dry, hard, crusts; which are constantly being renewed by a succession of pustules. This chronic form of impetigo is very peculiar and very interesting to study. It is about the second period of infancy that it is seen with its peculiar characters. The pustules are replaced by scabs, which do not become detached, their cutaneous surface becomes thick, assuming various tints, either brown or black, according to the quantity of exuded blood. As in all infantile eruptions, there is itching, which the children are unable to resist, and the action of the nails causes considerable abrasions.

The whole face is sometimes covered by a large crust, presenting the hideous aspect sometimes seen in confluent

variola. In other cases the eruption is limited to a single circumscribed spot upon the face, where large crusts are heaped up, forming a projection somewhat resembling an oyster shell. When these crusts fall off, or are removed by force, we find beneath them an excoriated bleeding surface, secreting a fluid like that of a blister. This eruption of impetigo (*figurata*) is often seated about the apertures of the nose, where it exhibits a remarkable obstinacy; superficial ulcers at length occur, which extend from the nostrils to the lips; the crusts forming upon these ulcers are no sooner removed than they are reproduced. This affection is often complicated with a chronic coryza, which may degenerate into ozæna. It is well known how coryza may affect scrofulous subjects. This catarrhal affection is several times renewed; it is acute at first, and then becomes chronic and habitual. Children affected with it sleep with the mouth open, owing to the obstruction in the nasal passages. The disease progressing, a muco-purulent discharge issues from the nostrils, and flows without ceasing over the upper lip. This becomes chronically tumefied, the cutaneous disease contributing to that result, and it produces the facial aspect which is described by various authors as characteristic of scrofula. The alteration of the mucous membrane is not always limited to these lesions; even when the impetigo has been cured, we may observe alterations supervene in scrofulous children, in the interior of the nasal fossæ. These are sometimes accompanied by a copious suppuration; in other cases, they are on the contrary dry and crusty. Most frequently, however, they secrete a purulent, bloody liquid, and what gives these ulcers a peculiar character is the horrible penetrating odour of the nasal suppuration. The lesions consecutive to these chronic affections result in the loss of the sense of smell.

The similarity of the texture of the mucous membrane

to that of the external integument accounts sufficiently for the production of these manifestations. So also with regard to certain forms of infantile ophthalmia, which are so intimately allied to cutaneous scrofulous affections.

The existence of the great classes of ophthalmia in early age is but little disputed. Some are idiopathic, and do not appear to be subordinate to any general morbid influence; they proceed as under analogous conditions in the adult. These are, properly speaking, *the ophthalmias of children*. Others constantly depending upon a special condition peculiar to infancy have their own mode of progress, and appear to be allied to a general condition of which they constitute one of the numerous manifestations.

We must here say a few words concerning the latter class which belongs to our subject, namely, of such forms of ophthalmia as are intimately connected with the presence of a scrofulous cutaneous eruption in the vicinity of the eyes. The ophthalmia called scrofulous is so termed, not only because it is characterised by a peculiar and special vascularity but also because it occupies a place in the series of morbid acts, the whole of which constitute scrofula.

Dr. A. BAUDELOCQUE, who has carefully studied scrofulous diseases has observed that ophthalmia is met with in cases of scrofula which do not deeply implicate the economy. The fact is, that like impetigo of the face in the second period of infancy, it is more frequently observed in the mild than in the severe forms, and in general at a period not much advanced. It may even be said that ophthalmia together with chronic eruptions of the skin constitute the first manifestations of a commencing scrofulous diathesis. Most authors who have written on this species of ophthalmia, have remarked its coexistence with chronic eruptions upon the face or scalp, and behind the ears, with an otorrhoea more or less copious, or with tumefaction of the nose and of the upper lip, &c.

In addition to the scrofulous character drawn from the former presence or coexistence of many scrofulous symptoms, the diagnosis is no longer doubtful when the ophthalmia assumes the appearance peculiar to what is called scrofulous ophthalmia. When we examine a certain number of children attacked by this disease we may observe in each of them a different alteration in the tissues of the eye. There may be in one an acute or chronic blepharitis, in another an ulceration, in a third an infiltration or a softening of the cornea, &c. It appears at first sight that each of them is labouring under a different disorder. It is only at a later period, after observing the succession and the catenation of the phenomena, that the connecting link is perceived, when they acquire their true diagnostic value as so many expressions symptomatic of the different degrees or rather of the different periods of the same disease. There often exists in scrofulous children a symptom called by BENEDICT, *scrofulous photophobia*, afterwards designated by Dr. HENLEY STORF, as *scrofulous optic hyperæsthesia*, which may last a shorter or longer period, and be remittent or intermittent before the ophthalmia becomes evident, and which may completely disappear without being followed by any visible inflammation of the eye.

It is not within our plan to describe all the numerous anatomo-pathological lesions of this variety of ophthalmia, but we wish to show that relations of different kinds exist between ophthalmiæ and the cutaneous affections of the face. These are in truth of many kinds. Thus, ophthalmia seems to be produced by a simple continuation of inflammation of the nasal fossæ, increasing or diminishing with the latter. Whence this practical consequence naturally follows, that we can only cure scrofulous ophthalmia produced by cutaneous propagation, by treating at the same time the affection of the skin, of which it is but a part. MACKENSIE observed that scrofulous ophthalmia was a

disease which affected the conjunctiva not as a mucous membrane, but as a continuation of the skin over the eye. Another relation of considerable importance, is that which exists between cutaneous diseases attended with a copious secretion, and scrofulous ophthalmia. This relation may be designated by the terms *alternation or compensation*. This clinical fact has been well observed and described by WARDROP, as we shall show when treating of the tetter. It consists in the establishment of a kind of equilibrium between the more or less acute phases of ophthalmia, and the excess, diminution, or arrest of the morbid discharge, and cutaneous secretion. Thus, for instance, in scrofulous ophthalmia coincident with impetigo of the scalp, whenever the secretion of impetigo is suddenly increased, there is simultaneously a complete remission in the ocular phenomena and *vice versa*. The fact in such cases is analogous to that observed in scrofulous otorrhœa. It is very common to meet it in the second period of infancy, with more or less abundant purulent discharge from the external auditory canal, the secretion of which in the same individual varies considerably in quantity, odour, and appearance. These variations stand, in scrofulous and dartrous subjects, in intimate relation with the supervening changes in the secretion of scrofulous impetigo, or that of concomitant humid tetter.

In some cases there is produced upon the face an eczematous or pustular inflammation, which is secondary, and must not be confounded with primary cutaneous affections, which may be the cause but not the effect of an ophthalmia. We speak of the eruption, on the cheeks, which results, in certain cases of severe photophobia, from the abundance and acidity of the lachrymal secretion.

TREATMENT OF SCROFULOUS DISEASES.

The difficulties which attend the treatment of scrofulous affections are known to all physicians. We are reminded that CELSUS has said *strumæ vel præcipue medicos fatigare solent*. One of these difficulties consists in the application of therapeutics to the various forms of scrofula; in the knowledge of the influences which periodically modify certain scrofulous affections, and the energetic and complete revolution induced by puberty. It would nevertheless be very erroneous to deny the incontestible action of therapeutic means; for though it may not be easy to cure the disease, we may frequently cause certain local cutaneous or other affections to disappear.

The hygienic treatment is in this disease of the utmost importance, as it is chiefly by its means that an amelioration is effected in cases of scrofula. Fresh air, warm sea baths, sulphur baths, hydrotherapia, muscular exercise out of doors, country residence, and an analeptic diet, are the best means to employ for many years to ameliorate the symptoms. Scrofula is, in fact, one of the first effects of the degeneration of races, having in its train so many primary and secondary lesions that we can easily understand the difficulty of reëstablishing the normal equilibrium in an organism so profoundly modified. Among the medicines most frequently employed we may enumerate the preparations of iodine, commencing with 0.2 centigrams during the first fortnight, and progressively augmenting the dose to a grain without exceeding that quantity. Iodureted baths in which the iodine is dissolved in combination with iodide of potassium are equally effective. The chlorides of calcium and barium, subcarbonate of soda, quinine, and iron and its compounds have by turns been commended as highly efficacious in scrofula. Bitter decoctions, such as those of gentian, hops, &c., are still daily employed.

For some years past the leaves of the walnut-tree and the syrup of walnuts seem to have become a very popular remedy. Fish oil, so efficacious in rhachitis, has been and is still almost exclusively given by many physicians. All these medicaments have been attended with success, but it must be admitted, only in cases where they have been aided by a proper hygienic treatment. The local treatment of tubercles and of scrofulous ulcers is as the success of BAUDELOQUE proves of great importance; consisting in particularly attending to the ulcers, tubercles, and cicatrices. The ulcerated surfaces must be frequently washed, and stimulated by cauterization, and the detached borders as well as the fungosities must be carefully excised.

A.—Treatment of Lupus.—Besides the internal remedies adopted to combat the scrofulous temperament, each of the varieties of lupus present particular indications. It is rare to observe the commencement of lupus *exedens*, the disease is usually in a more advanced state, and in most cases it is necessary to moderate the progress of ulceration. The principal caustics employed are, nitrate of silver, caustic potash, butter of antimony, acid nitrate of mercury, the actual cautery, arsenical powders and pastes. These cauterizations must be very carefully managed. We must commence by cauterizing a very circumscribed spot, gradually touching the whole surface.

One of the best caustics is unquestionably the acid nitrate of mercury; its advantages over the others are its energy and the facility with which it may be employed. It causes, however, considerable pain, and immediately after its application the cauterized surfaces become of a greyish white colour; yellow and slightly adherent crusts are formed, which detach themselves spontaneously in from seven to fourteen days. In lupus of small extent in children, M. RAYER recommends that the ulcerated surfaces, deprived of their crusts, should be

sprinkled with DUPUYTREN's powder,* (protochloride of mercury ninety-nine parts, arsenious acid one part). This remedy, which acts rather as a specific than as a caustic, ought according to that celebrated teacher to be applied as follows: "If the surface of the lupus is ulcerated, moist, and clean, it is to be dusted over with the above mentioned powder, so as to cover it with a layer of about a millimetre at the most in thickness. If the surface is covered with a crust it must be removed by cataplasms and then powdered in the manner just described. Finally, if the ulcer is actually covered with an imperfect cicatrix, we should powder the surface of the ulcer which is no longer bleeding. Should it be apprehended that the powder is not sufficiently adherent to the parts, or that it may be easily displaced, we may mix it with gum water or with conserve of roses. In such cases the quantity of arsenious acid must be increased by one or two hundredth parts. In every case we must wait until the powder or the ointment falls off by itself, which usually takes place at the end of eight or ten days, and then renew the application until a cure is effected, which sometimes happens after the lapse of eight or ten weeks, or after five or six applications."

We know that arsenical pastes cannot be applied with perfect security unless we can prevent their introduction into the nasal fossæ. In spite of our precautions it sometimes happens that the economy is more or less affected by arsenical absorption.

The animal oil of DIPPEL is a very feeble caustic, which may, however, be of some service; its action is weak and its duration short. It adheres to the skin in drying, and may be applied to parts where energetic caustics might prove dangerous, as around the orifices of the mouth and the nostrils.

* RAYER: *Maladies de la Peau*, t. ii, p. 209.

Lupus non exedens offers greater resistance to curative agents than the preceding form. Many remedies have been administered internally, such as the animal oil of DIPPEL, beginning with a dose of five or six drops, the decoction of FELTZ, PEARSON'S or FOWLER'S solution, Asiatic pills, &c., without having displayed any very evident action over the ultimate progress of this severe affection. Mr. RAYER says: "The deuto-iodide of mercury administered daily in doses of one-fourteenth or one-tenth of a grain, gradually increased to one-fifth of a grain, is of all medicaments that I have employed internally the only one which appeared to me to exercise an undoubted influence upon the progress of the tubercles of *lupus non exedens*. A month or two after the exhibition of this remedy, the parts covered with tubercles sometimes become painful; in consequence of a local intestine inflammation, attended at the time with a vague and irregular febrile movement, the tubercles shrink, and many of them disappear completely. After continuing its use from one to three months, patients should abstain from it for some time, and try its influence again after the lapse of a certain interval. Independently of the undoubted action which this remedy exercises over existing tubercles, it acts not less favourably upon the constitution in preventing or completely arresting the formation of new tubercles. Nevertheless, despite of the care I have taken in its administration, and the attention with which I have watched its effects, I have sometimes seen symptoms of inflammation of the large intestines supervene, which obliged me to *suspend or to abandon its use altogether*." How cautious this last remark should make us as to the use of this medicine in children, as well as with respect to the doses in which it should be administered!

The chief external remedies employed are, iodide of sulphur (iodide of sulphur one part, hog's lard thirty parts);

protiodide of mercury (protiodide of mercury two parts, hog's lard thirty parts); deuto-iodide of mercury (deuto-iodide of mercury one part, hog's lard thirty parts). These ointments are employed by friction, under their influence the skin becomes red, and the tubercles are stimulated, after which they sometimes shrink and disappear. One of the results of these stimulants, whether caustic or otherwise, is erysipelas. We know to what a degree this intervening inflammation may modify certain cutaneous affections, especially lupus, phagedenic chancres, ichthyosis, and psoriasis. Hence we find that skilful dermatologists, struck by the energetic curative action which erysipelas sometimes manifests, have endeavoured to produce it, and it is remarkable that the appearance of this exanthem is much more frequent in some diseases than in others. Thus, while it is extremely difficult to provoke it in syphilitic affections, it supervenes at certain periods spontaneously in the progress of lupus.

Dr. HARDY, of the Hospital St. Louis, from whom the study of cutaneous diseases has received a great impulse, is in the habit of employing as a means of exciting erysipelas, an ointment made of equal parts of biniodide of mercury and hog's lard. M. RICORD makes similar attempts in all cases of phagedenic chancres, and he remarks that "*erysipelas is the specific for phagedenism* as much as mercury is the specific for syphilis." This natural and spontaneous substitution is a most fortunate occurrence, as it may hasten and terminate the habitually slow and painful progress of the various species of lupus. But before completing the enumeration of the numerous internal and external remedies which have been successively employed with more or less advantage, we must not forget to mention the use of cod-liver oil in large doses, the results of which have, of late years, been truly extraordinary. We dare not affirm that this agent, so exten-

sively employed at present, will always maintain the high character these cures have obtained for it.

B.—Treatment of Impetigo of the Scalp.—The treatment of impetigo, as of all scrofulous affections, must be both general and local. Chalybeates, tonics, exposure to the sun, gymnastics, cold water, &c., fulfil the first indication. The local treatment consists, at first, in cutting off the hair as close as possible. BAUDELOCQUE was in the habit of using the hyposulphate of lime which when applied for from three to five minutes, removes the hair as cleanly and regularly as in the best shaved beard. Often when this operation has been renewed several times, and is followed by daily saponaceous lotions, impetigo of little intensity disappear rapidly. In the most obstinate cases, when after the application of the hyposulphate of lime considerable ulcerated patches exist, the application of tar ointment is followed by the best effects. When the eruption is of small extent a cure may often be effected in a few weeks by cutting the hair very short with a pair of scissors at the parts where the disease is located, by removing the crusts by emollient poultices, or by the daily application of fresh hog's lard, combined with proper care, and great cleanliness. In serious cases, when there is constitutional derangement, sulphurous waters, such as Barèges, Canterets, &c., have a double action, which is very energetic. It is so important to improve the general health that sea-bathing, by acting upon the whole economy, is frequently alone sufficient to cure the most intense granulated impetigo in a marvellous manner. We have frequently applied caustics to the patches of impetigo, either the nitrate of silver or the tincture of iodine nearly pure. The use of the nitrate of silver, except in cases where grey and pallid ulcers existed, was attended with but moderate success. The tincture of iodine was more efficacious; it had, however, the inconvenience of exciting considerable pain.

C.—Treatment of Impetigo of the Face.—In its acute form this affection only requires emollient lotions, such as decoction of marshmallows, tepid milk, decoction of poppies, &c. Baths, cataplasms, &c., may be employed daily with advantage.

In the chronic form, sulphurous or alkaline lotions, vapour douches, and cauterization, are recommended in order to stimulate the atonic excoriated surfaces. It is, however, of special importance that in the chronic form of impetigo of the face the general tonic treatment should be persistently and energetically pursued, the more so as this affection is intimately allied to a scrofulous diathesis.*

* In the treatment of cases of acute impetigo it is of the greatest possible importance that the diet of the child should be strictly regulated and attended to. Some mild saline aperient should be administered in the first instance, and this should be followed by a saline mixture with some dilute acid for a day or two, or until the inflammation of the skin begins to abate. During this period no ointment of any kind should be used; but if the inflammation of the skin is very intense, and if there should be much itching, we may apply lotions of glycerine or of glycerine and acetate of lead. As soon as the inflammatory symptoms begin to disappear the salines should be replaced by some of the vegetable tonics, such as salicins, cinchonine, or cinchona; and the eruption should then be dressed with ointments containing calomel, zinc, or lead.

The chronic forms of impetigo almost always occur in scrofulous children. In these cases it is generally necessary to prescribe as good a diet as the patient can take without producing disturbance of the stomach and bowels. The vegetable tonics may nearly always be prescribed in the first instance in combination with small doses of iodide of potassium, and in a few days some of the metallic tonics, especially manganese or iron, may be substituted for these. If the disease should still prove rebellious we recommend the administration of small doses of sulphur in combination with glycerine. Cod-liver oil may also be advantageously given in such cases when the state of the digestive organs will admit of it. As local applications we recommend especially liniments or ointments containing oil of cade or creosote.—(Ed.)

FIFTH CLASS. — DARTRES (TETTERS).

Under the generic term *Dartres*, we group a certain number of cutaneous affections presenting some characters in common. It is quite true that the resemblance does not exist either in their anatomical lesions or in their external forms; inasmuch as in this group are found vesicular, papular, and squamous affections. It is beyond doubt that certain relations exist between some affections of the skin and particular states of the general economy. But when we study those cutaneous diseases which usually appear without any appreciable external cause, they will be found to possess a close resemblance, which displays itself by the slowness of their progress, their hereditary transmission, the frequency of relapses, and also by their occurrence at the same time, which sometimes happens when they have passed into the chronic state. Hence the denominations of lichenoid eczema, impetiginous eczema, &c. It often also happens that these cutaneous affections, without being mixed, succeed each other in the same patient; so that, for instance, an eczema may be replaced in the following year by a lichen. Physicians of all times, agreeing in this popular opinion, have been led to believe that cutaneous diseases presenting these common characters were under the dependence of a peculiar state of the constitution, which is designated under these circumstances by many authors as the *dartrous constitution*.

We must bear in mind that in France, the word *dartre* has, until the beginning of the present century, been the synonyme of a chronic affection of the skin. According to PETER FRANK, the *dartres* were those cutaneous diseases

which involved both the rete mucosum and the dermis, in contradistinction to porrigo, which only attacks the epidermis. The term dartsres, which according to some physicians has had its day, has been vehemently attacked by modern authors, upon the ground that it implicitly admits a *dartrous virus* or *principle*. Without admitting the existence of a dartrous principle, we cannot help acknowledging that certain hereditary cutaneous eruptions are not diseases having an independent existence. Every one can verify for himself, that they are frequently combined, that they succeed each other, and that they must be admitted as affections symptomatic of peculiar states of the general economy. It is with dartrous as with syphilitic eruptions, they have a common bond of union and a similar mode of progress. It is very true that the connecting link in syphilitic affections is so abundantly evident, that all modern dermatologists, despite the strictness of their analysis and classification, have been compelled to collect them into one clinical group.

We venture to go farther, and to express our belief that by following this clue it may be possible to demonstrate the existence of cutaneous affections with their distinctive characters, as belonging to this or that diathesis; such as the scorbutic, rheumatic, gouty, &c. May not even some of the affections that we call dartrous be the expression of those important diseases respectively called rheumatism, and gout, as many facts occurring in the adult would lead us to believe?

SECTION I.—PRURIGO.

Prurigo is anatomically characterised by papulæ, having the colour of the skin and accompanied by intense itching. These papulæ are generally very soon excoriated by the action of the nails. This gives rise to the formation of very small blackish crusts, which adhere to their surface.

When these crusts, which are nearly always circular in form, lose their attachment, they leave yellowish spots on the skin, which continue for some time, and represent the small dimensions of the papulæ accurately.

It is exceedingly rare to meet with this affection in an infant. It rarely if ever appears during the first period of infancy. Even in the second period it only appears under certain special conditions, such as poverty, or want of cleanliness, and it frequently succeeds to some previous disease.

Prurigo, in young subjects, has not as it has in the adult and in the old, a tendency to become localised and perpetuated in certain regions. We do not, therefore, meet with any facts analogous to those observed at a more advanced age, and which have been designated as *prurigo scroti*; *prurigo podicis*; *prurigo pudendi muliebris*. In children the eruption is generally developed at once or successively over the whole body, affecting, however, by preference, the dorsal or posterior parts of the trunk and limbs. One of the most conspicuous phenomena of prurigo is, without doubt, the itching which is almost continuous, and which is frequently rendered more intense by various influences, such as violent exercise, the pressure of the clothes, the heat of the bed, &c., hence the epithet *formicans*. The papular eruption is often complicated with epidermic exfoliation, or with more or less extensive crusts succeeding the violence done to the skin owing to the intolerable itching which sometimes manifests itself on different parts of the body; and, singularly enough, sometimes on parts where the papulæ are few or entirely absent. The duration of this eruption is generally very short; not being as in the adult, and especially in the old, an essentially chronic affection. Nor is it generally very obstinate, but as in all dartsous affections, relapses frequently occur in the same patient. In adults and old people, prurigo, if it has existed

for a long period, usually produces a thickness, and a peculiar roughness of the skin. Such is not the case in the child, its duration being only a few weeks, or at most some months; it most frequently disappears without leaving any lasting traces upon the skin.

The diagnosis of prurigo is always easy, as it is impossible to confound it with strophulous affections on account of the difference in the age of the patients. Eczema and scabies may in certain circumstances offer some distant resemblances, but the difference of the lesion, prurigo being characterised by papulæ, while scabies and eczema are constituted by vesicles, renders error impossible. We may always on close examination find some vesicles not yet broken; moreover the papulæ of prurigo, which preserve the colour of the skin, present when scratched, black crusts, formed by drops of dried blood, while the vesicles of scabies are transparent when intact, and when broken are replaced by an irregular, thin, and yellowish crust. Prurigo shows itself chiefly upon the back and the external part of the limbs, while eczema and scabies appear upon those parts of the body where the skin is thin and supple, as the anterior part of the trunk, the articular folds, the arm-pits, the groin, and the interspaces of the fingers. Scabies is contagious, prurigo is not. In scabies the itching is nearly continuous; in prurigo the exacerbations are much more decided. It is more difficult to separate this affection from that called lichen, which like prurigo is characterised by papulæ; but in lichen the papulæ are smaller, generally red, and when excoriated they furnish a characteristic serous, sanguinolent discharge. The itching of prurigo is more intense, that of lichen being generally limited to a sort of troublesome pruriginous tickling.

SECTION II.—LICHEN.

Lichen is an affection characterised by the simultaneous or successive eruption of papulæ scattered over the whole surface of the body, or dispersed in clusters upon some limited part. Dermatologists have described a variety of species which are generally not met with in the child. In the latter lichen seems to be a chronic affection, which only appears in the second period of infancy. The similitude of the lesion, has caused it to be considered as identical with strophulus, from which it differs in many respects; and we shall see in the sequel, that the itching common to prurigo, strophulus, and lichen, as well as to other and very different cutaneous affections is not sufficient to justify us in classing these various lesions in the same group.

Chronic lichen simplex generally appears somewhat suddenly, unattended by any general febrile symptoms, being usually preceded by a slight itching, after which the papulæ slowly appear. They are small and globular, resembling what is vulgarly called a goose-skin; they are sometimes a little inflamed, that is to say rather red, but though at times acuminate, they contain neither pus nor serum. After a very variable duration, sometimes of seven days, at other times a very long time after their appearance, they disappear, terminating by a slight desquamation. Lichen simplex may thus by successive papular eruptions persist for months and even for years. The health of the children in this form is in nowise deranged. If the cutaneous affection becomes more intense, and the papulæ are closer together and more pruriginous, they are soon excoriated by the nails of the patient, and a slight sero-sanguinolent exudation escapes from them. In such cases the skin loses a little of its suppleness, and becomes rough with a more or less considerable desquamation. But what

is more frequently observed in the second period of infancy, is the transformation of chronic lichen simplex into *lichen agrius*.

Lichen agrius may, in children as well as in the adult, appear at first alone and in an acute form, but in most cases it follows, or rather it establishes itself after having been preceded by a general eruption of lichen simplex, of which it is, so to say, only a pathological exaggeration.

It is distinguished by elevated, acuminate, pruriginous papulæ of a bright red colour. These papulæ are grouped irregularly upon an erythematous cutaneous surface, which circumscribes a kind of red inflamed zone. All this surface is the seat of violent itching and painful tension. These sensations are usually exasperated towards the evening, or in the night, when the patients excoriate themselves severely with their nails. In consequence of the violence done to the skin, there escapes a sero-sanguinolent liquid, which may be seen to issue from the apices of the excoriated papulæ. The discharge soon concretes in the form of soft, yellowish crusts, which are usually but very slightly adherent.

ALIBERT has described this cutaneous affection under the name of *humid squamous dartre*. The skin upon which this variety of lichen shows itself, assumes, after the eruption has lasted for some time, a special pathognomonic character: it becomes dry and rugous, intersected by deep wrinkles, particularly if seated in the cutaneous folds in the vicinity of the articulations; often when the affection has by the production of successive crops of papulæ continued for several months, the surface exhibits a peculiar deep brown tint, sometimes very marked, which has induced certain authors to say that lichen is chiefly an affection of the chromatogenous apparatus. This eruption is frequently neither so grave nor so persistent; it then reveals itself by small circular groups of papulæ seated very near each other, both the itching and

the duration of which are less than in the preceding cases. These lichenoid groups appear by preference upon the external parts of the forearms, the dorsal surface of the hands, the front of the chest, &c.

Lichen has generally a chronic progress, and never appears in the first period of infancy. If the patients are descended from dartrous parents, the development of the disease may be observed in the first years of the second period of infancy, in which case more or less frequent relapses occur. At times the affection takes an acute form, when vesicles are seen to appear amidst the papulæ. These cases are usually serious, and may render us at times doubtful as to the diagnosis. But in eczema the skin never acquires the brown colour of chronic lichen. On the contrary, eczematous surfaces are tense, glossy, and red, and we can never detect even the transitory presence of a papule.

In old lichens a true and persistent desquamation of the diseased surface is established, which might lead to the belief in the existence of psoriasis, but in the latter affection there is no itching, and moreover, the squamæ are large, white, and glossy, and are reproduced with an energy and an abundance which is characteristic. The prognosis of lichen is far from being as serious in the child as it is in the adult and in old persons; and we scarcely if ever meet in the child with that variety called *lichen lividus*, which is only cachectic lichen. We often see children from seven to fourteen years, having good health and a good complexion, while exhibiting more or less numerous patches of *lichen agrius*, or a general *lichen simplex*.

As in prurigo it is extremely rare to meet in children with those obstinate lichens, the prognosis of which is sometimes so serious in adults and old people, when lichen and prurigo localise themselves with desperate tenacity round the anus and the genital organs. It is equally rare to see lichen upon

the scalp; upon the face, on the contrary, under the mild form of circumscribed lichenoid patches, it might lead to a belief in the existence of *herpes circinatus*, but in describing the latter affection we shall see that it is not easy to commit an error in this respect.

SECTION III.—ECZEMA.

Eczema is a dartsrous affection, characterised at its commencement by small non-prominent vesicles, closely crowded together and generally accompanied by itching, oozing excoriations, and scales.

Three principal forms are described in the adult: *eczema simplex*, *eczema rubrum*, *eczema impetiginodes*. In the child this cutaneous affection presents considerable differences from that observed at a subsequent age.

We have endeavoured to exhibit the physiognomy of achor, and to show that for many reasons that affection deserves a special description. From it however, are borrowed all the features attributed to the eczema of young children, under the name of *impetiginous eczema*.

There exists, in our opinion, during lactation a disease called achor. At a later period, *i. e.* from the commencement of the second period of infancy, we meet with eczema simplex, and finally from that period up to puberty, with eczema of the scalp under its two clearly defined forms. In attentively looking for some possible marks of distinction between what is described in children at the breast under the name of achor, and in older children under the names of eczema of the face and scalp, and of impetiginous eczema it will be perceived that these denominations and descriptions have evidently the same facts as starting points. But it is difficult not to recognise that achor has some special character deserving a separate designation. Hence we may judge of the impropriety of associating with achores in the

new-born child, all that authors have described under the various forms of eczema. Nevertheless a cutaneous affection may exist in the first period of infancy, resembling as much as possible the description given of *eczema simplex* in the adult.

It is usually attended by slight indisposition, even by more serious disorders, such as fever or diarrhoea. Then nearly at the same time small vesicles scattered here and there, sometimes in groups, sometimes isolated, appear upon certain parts of the body. These acuminate vesicles are indolent, without any well marked redness at their base, and remarkably transparent; if we rupture them a limpid serum escapes. After the lapse of a few days the serum becomes turbid, the vesicles shrink and the cure is soon effected. In another and more serious form *eczema simplex* is much more circumscribed. It appears by successive eruptions upon a red, inflamed, and shining surface, covered by vesicles crowded together, from which a colourless serum oozes, which gives to the vesicles the appearance of a miliary eruption. After a certain number of days, the serum becomes thickened and turbid, the vesicles shrink and break, and the cure may be effected by a furfuraceous desquamation, or the affection may be reproduced by new vesicular eruptions. In most cases this kind of *eczema simplex* occupies but a small part of the body, as for instance, the whole of a limb—the arm, the hand, the foot, &c. But in some few rare, and then very grave cases, the cutaneous affection becomes general in this form by successive eruptions, and almost always some serious general phenomena soon arise and render the disease mortal.

It is towards puberty, or from the tenth to the fifteenth year of age that cases of chronic eczema of the limbs, resembling more or less those of the adult, are met with; but we never find in children either eczema of the arms or of the genital organs having the obstinacy and the gravity of that which we observe in mature age and in old persons.

On the other hand, the child is subject to eczema of the scalp, the characters of which render it almost peculiar to infancy.

ECZEMA OF THE SCALP.

We have in the article on Achor endeavoured to show how this disease of the first period of infancy may be perpetuated by eruptions, which in proportion as the infant grows up, change their anatomical characters to assume the forms peculiar to the cutaneous elements of this or that diathesis. Thus for example, a fine large child, born of lymphatic parents, may have a copious and persistent eruption of achor during the whole period of lactation, and if, as is frequently observed, the hygienic conditions are unfavourable and undermine the general health, the infant will soon present all the characters of a lymphatic constitution, which (the hygienic conditions assisting) will speedily be exaggerated, and the achor not being cured, it will transform itself successively at each fresh attack into manifestations of scrofulous impetigo.

The facts are exactly the same in the dartrous diathesis. A large and strong child sprung from dartrous or gouty parents, may have achor during the whole period of lactation, then after more or less numerous transitory recoveries, we may with advancing age watch a real transformation of achor into affections exclusively dartrous, among which the most frequent are eczema and lichen. Thus, eczema of the scalp seems frequently to be the continuation of achor.

Eczema of the scalp has two very distinct forms, *humid eczema* and *squamous eczema*, which deserve a special description, though each of these forms is but an analogous expression of the same dartrous diathesis.

These two forms have for a long time been confounded with what was designated under the badly defined name of *teignes*. It is sufficient to study these varieties of

eczema to comprehend how easy it is to confound them, especially at certain periods of the eruption, when the anatomical elements do not present all their characters; or when, as sometimes happens, they seem to be mixed. But in following these cutaneous affections through their different phases from their commencement to their decline in relation to age, error is no longer possible.

Humid eczema of the scalp is, as has been stated, often the successor of achor in the second period of infancy, the crusts of the latter affection gradually losing their distinctive character. The pustules are succeeded by vesicles irregularly grouped, and they present themselves filled with a perfectly limpid serum.

The rupture of the vesicles permits the escape of this liquid, the more or less abundant oozing of which constantly moistens and glues together the hair; hence the peculiar nauseous odour often emitted by such patients. When the eczema is of some extent, there frequently exist upon certain parts, soft, yellowish crusts, having somewhat a squamous appearance. On examining the scalp, it is found to be turgescient, with bright red spots, as if excoriated, accompanied by itching less intense than that of the lichenoid affections, but still sufficient to induce the patients to scratch themselves as much as the painful tension of the parts will permit. This acute condition is not lasting, the inflammation subsides; but owing to numerous influences resulting from regimen, mode of life, constitutional affections, &c., a fresh crop of vesicles supervene, with all their ulterior phenomena. When the disease is old, or when it approximates too closely to achor, the eczematous form is less distinct; pustules exist, whence the name impetiginous eczema, which adds nothing to the physiognomy of the disease, unless it be that the crusts are more tenacious, thicker, and cracked, the fissures of which favour the escape of the sero-purulent

and fetid discharge. Consequent upon the duration of the large secreting ulcer which sometimes covers the whole scalp, secondary phenomena dependent upon it occur, such as an alteration in the hairs, which lose their suppleness and gloss, becoming dull, and at length they diminish considerably in number. The cervical glands are often in a more or less chronic state of inflammation. When humid eczema is about to terminate the discharge diminishes, the crusts become less adherent, and the humid is frequently replaced by what may be called the scaly period of eczema. The scalp is covered for a longer or shorter period with small greyish, dry, squamous, lamellæ, which at length are not reproduced.

The duration of this affection is very variable in dartrous children sprung from dartrous parents. It may last the greater part of infancy, and only be cured at puberty or even later. This obstinacy is, however, chiefly met with in subjects brought up in poverty and dirt. In such patients it is common to see other dartrous affections, such as lichen, *eczema simplex*, prurigo, ichthyosis, &c., coexist with eczema of the scalp; this affection does not appear to be contagious, and the baldness which sometimes results from it is not constant.

The copious discharge in chronic humid eczema of the scalp being in some sort a physiological function, has induced authors of every period to point out the danger of its sudden suppression. There can be no doubt that these facts have been made too much of, and that very frequently accidents have been attributed to the sudden suppression of the discharge which are perfectly foreign to it. Unprejudiced minds will nevertheless find in the fact a fertile source of pathogenic and therapeutic indications. It establishes indubitably in children between humid eczema of the scalp, and affections of the adjoining cutaneous or mucous surfaces, certain relations of equilibrium, such as we have already

indicated in scrofulous cutaneous affections of the face, and of which we shall have more to say in the sequel.

In one of the wards of the Hospital for Sick Children under the care of Dr. SÉE, there is at present a little boy, six years of age, suffering from a dartrous affection of the face; every time the eruption disappears, the patient is seized with a violent attack of asthma.

Squamous eczema of the scalp has been perfectly described under the name of *porrigine amiantacée*, by ALBERT, who has made use of the numerous examples observed by himself, and the still more numerous cases collected by the brothers MAHON. This variety of eczema of the scalp is comparatively rather rare, but its aspect is so well defined that it cannot be mistaken.

It manifests itself by glossy, silvery scales, uniting and separating the hair at the same time by small meshes enveloping them in their whole length. ALBERT has very justly compared these micaceous scales to the thin pellicles which sheathe the growing feathers of young birds, or still better to the substance called *asbestos*.

The scalp is usually more or less covered with these meshes thus enclosed in dry and shining envelopes. This affection occupies by preference the superior and anterior part of the head. On examining the scalp it is at times found red, slightly inflamed, and grooved by fissures. The illustrious dermatologist whom we have just quoted, has effected a separation of the morbid secretion by means of cataplasms not less than sixteen times in the same patient: the pathological product was constantly reproduced in the form of convoluted scales with a silky and brilliant aspect.

We meet sometimes in squamous eczema with a discharge much less copious than that occurring in the humid form, and which contrasts strongly with the usual dryness of the squamous variety. Under the influence of itching, which

is at times very tormenting, the patients produce excoriations on the scalp by constant scratching; this is a source of the oozing which may appear as a return of the squamous into the humid type; for sometimes the former is merely a consequence of the humid variety of which it is, so to say, but a phase. We have nevertheless frequently seen this form with its peculiar characters well marked, without its ever having, according to the observations of the patients and their parents, exhibited the discharge so easily observed in humid eczema.

This variety, the most rare of affections of the scalp, is generally very obstinate, and consequently induces at times more or less extensive alopecia, but in most cases there is no permanent baldness.

This is not a disease of the first period of infancy. We have never met with it in subjects under seven or eight years of age. Nor have we in this form ever seen those *offshoots* towards the face and ears, such as are frequently observed in humid eczema of the scalp.*

SECTION IV.—LEPRA.

Lepa is a cutaneous affection characterised by the production upon the diseased surfaces of scaly patches of various dimensions. The surfaces thus altered assume the form of elevated round or oval discs, the centre of which is healthy.

* The desquamative stage of chronic eczema, especially in scrofulous subjects, is very liable to be mistaken for pityriasis, and in some cases the diagnosis is almost impossible.

The chief points of distinction between them are the following:

- 1.—The scaly patches of chronic eczema are much more extensive and much less numerous than those of pityriasis.
- 2.—The scales of chronic eczema are thicker than those of pityriasis; they have a yellowish brown colour, and are rather moist. The scales of pityriasis on the contrary are thin, dry, and greyish in colour, and more closely adherent than those of eczema.
- 3.—Chronic eczema in its scaly stage is not accompanied by the severe itching which is constantly met with in pityriasis.
- 4.—Chronic scaly eczema is always preceded by a sero-plastic oozing which is followed by crusts, whilst pityriasis is scaly from its commencement.—ED.

The chief symptom of the disease to which modern dermatologists have, after WILLAN, given the name of lepra, is the morbid secretion of the epidermis, in consequence of which, as long as the disease lasts, the morbid surfaces produce dry, shining, and more or less thick scales.

The disease commences with red, slightly elevated spots, resembling papulæ, which as they become larger are covered with small white epidermic scales, the separation of which is announced by itching. After many successive removals of these scales or squamæ, it is easy to perceive the rapid enlargement of the scaly spots. The increase in size takes place in a characteristic manner; it is always effected in a circular form, by the modification of the centre, which appears to be healthy, and slightly depressed on account of the elevation, which is sometimes very marked, of the circumference of the patch. These discs vary considerably in size, but we have never seen them as large in children as they are in the adult.

The squamæ are superposed, especially at the circumference of the patches, and become thicker and thicker so as to form a very prominent layer. When they fall off and the disease is of some standing, the subjacent skin may be furrowed by cracks, but generally the small round surfaces thus covered with scales appear, after their fall, red, shining, and but slightly raised above the level of the healthy skin which surrounds them.

The morbid reproduction of the scales is incessant; as soon as they have fallen new ones appear, which by their rapid production seem to favour the separation of the old scales. Lepra does not generally exhibit in children all the external characters described in adults and old persons. The patches as we have said are less extensive, the scales whiter, smaller, and less prominent. The progress of the disease is also slower, and these slight differences approximate lepra to

certain aspects of psoriasis. It is only at the approach of puberty, when most infantile cutaneous diseases lose their peculiar characters, that lepra assumes the form it exhibits in the adult.

Lepra has never been observed during the first period of infancy, it is only met with in the second period, and even then it occurs most frequently after the seventh year.

In childhood, as at subsequent ages, lepra is sometimes limited to the elbows and knees. It most frequently shows itself upon both legs and both arms at the same time; it rarely appears upon the scalp and hands; it has been seen upon the temples and the outer angles of the orbits. The trunk is by no means exempt, and some authors mention that upon the lower part of the belly the leprous patches are more numerous and prominent.

The duration of lepra is always long, it sometimes persists for years when in the child as in the adult, it appears to have annual periods, during which it seems that a complete cure is about to supervene, but the previous state is soon reproduced. In other cases the disease disappears regularly every year in the spring, to reappear in the autumn.

In lepra and in psoriasis a peculiarity exists which is apparently inherent in the constitution of dartrous subjects affected with the dry and squamous forms of cutaneous diseases. This is a habitual dryness of the whole cutaneous surface; it is difficult to excite perspiration in these patients even by violent exercise.

SECTION V.—PSORIASIS.

Psoriasis is a chronic disease of the skin, either limited to a single region of the body or extending almost to its entire surface. It presents itself in the form of papular elevations, which are transformed into squamous patches of various dimensions, not depressed in the centre, and with irregular and but slightly raised margins.

Four distinct forms of psoriasis have been observed in the adult: 1st. *Psoriasis guttata*; 2nd. *Psoriasis gyrata*; 3rd. *Psoriasis diffusa*; 4th. *Psoriasis inveterata*.

These four varieties are not met with so distinctly characterised in the infant; moreover, we frequently meet in the latter with a form of the disease which has been recently well described by CAZENAVE, under the title *psoriasis capitis*.*

The most frequent variety met with is that called discrete, or *psoriasis guttata*. It usually commences with a certain number of papulæ, and small isolated scaly patches from two to four lines in diameter, the aspect of which has been compared by WILLAN to large drops of water sprinkled upon the skin. Each of these squamous patches or papulæ is soon covered with dry scales of a dull white colour. The patches are slightly prominent in the centre, and are at a considerable distance from each other.

The cure is, as in lepra, effected from the centre to the circumference of the patches, and in proportion as the cure advances, they are transformed into segments or small arcs of circles. Like prurigo, psoriasis occupies by preference the posterior part of the limbs. When the affection is less discrete, and large patches are situated near each other, it resembles that species called *psoriasis diffusa*, which is characterised by a more serious eruption, the patches of which are more extensive and irregular, with squamæ more or less thick. It commences in this form around the articulations, the elbows, and knees; and, thence extending, it sometimes invades very large surfaces. This form is rarely seen in the child, and the species called *inveterata* is never or scarcely ever met with. We may say almost the same in respect to the varieties of psoriasis, named from the seat they occupy, such as—*psoriasis scroti*, *psoriasis unguium*, *psoriasis præputialis*, *psoriasis palmaria*, &c.

* *Traité des Maladies du Cuir Chevelu*. Paris, 1850, p. 147.

Psoriasis capitis alone seems to possess some importance, both from its frequency and from the difficulty in its diagnosis.

As described by CAZENAVE, *psoriasis capitis* is characterised by squamous patches slightly raised above the level of the skin, dry, of a sparkling white colour, irregular, and more or less extended, usually confluent, and so disposed as to form continuous surfaces. They are separated into a number of small plots, separated by intervals or interstices, from which a fine, whitish, dry, and glittering powder escapes in great abundance. Upon the scalp, psoriasis has a unique form and progress; it constantly assumes the aspect of psoriasis *diffusa*, whatever may be the form of psoriasis coexisting upon the rest of the body. Psoriasis of the scalp frequently advances a few centimeters upon the forehead, the cheeks, and the nape of the neck. Whilst psoriasis of the body seldom gives rise to itching, that of the scalp occasions it sometimes in an eminent degree. Alopecia may result from this affection when there has been a more or less extensive inflammation. When the squamous eruption is very confluent and the disease has lasted a long time, the hairs before falling off are for a considerable period woolly, thin, and discoloured. This consecutive alopecia is never permanent, for the scalp after the cure of the disease, recovers all its previous characters.*

* Psoriasis bears considerable resemblance to pityriasis, but it may invariably be distinguished from it by attending to the following points of difference:

1.—In psoriasis the scales are seated on patches of a coppery red colour, which project above the level of the skin. In pityriasis the patches are not prominent, and when of a red colour they have not the coppery shade.

2.—In psoriasis the scales are large, thick, imbricated, very closely adherent, and of a silvery white colour. In pityriasis the scales are small, thin, not imbricated, of a greyish white colour, and not so firmly adherent.

3.—In psoriasis the itching is almost always very slight and sometimes absent, whilst in pityriasis it is generally very intense.

4.—In psoriasis we almost invariably find patches of the disease around the elbows and knees, but it is not so in pityriasis.—ED.

SECTION VI.—PITYRIASIS.

Pityriasis is a chronic inflammation of the skin, characterised by red patches, upon which a more or less persistent desquamation of the epidermis is established.

Pityriasis may be local or general, the occurrence of the latter form being very rare.

It commences with very superficial erythematous patches, attended by considerable itching. These cutaneous patches are but slightly inflamed, sensitive to pressure, and attended by a certain feeling of tension, in which the subcutaneous cellular tissue seems to take part. It is difficult to perceive this redness and tumefaction upon the scalp, but they can be easily detected upon other parts of the body. After a few days the redness and the tension diminish, the epidermis becomes cracked, and then the regular desquamation commences.

This is effected by the exfoliation of small epidermic scales. They are formed by the epidermis, not thickened, and are three or four lines in diameter. Their dimensions vary according to the place whence the epidermis becomes detached; thus the pellicles are larger from the posterior part of the trunk and limbs. Upon the parts where the exfoliation has just taken place, a certain redness is perceived, attended sometimes by a serous oozing analogous to that of eczema.

When the oozing becomes somewhat copious, the diagnosis may be doubtful. Itching is sometimes as intense in pityriasis as it is in eczematous and lichenoid affections. The disease occurs at all periods of infancy, but it is never generally diffused, a severe form of which some rare instances are met with in the adult. We can by no means consider the *natural exfoliation*, which the skin of new-born children presents a few days after birth, as belonging to pityriasis.

This affection is frequently local, and the prognosis is

always favourable, especially when it is limited to small surfaces. Notwithstanding the frequency of relapses the disorder is not serious. It is somewhat rare to find the desquamation in the child attended, as it is in the adult, by an abnormal colour of the tissues. This appearance has led to the description of two species: *pityriasis nigra* and *pityriasis versicolor*.

We have seen some remarkable cases of local pityriasis. In a family consisting of ten children, three girls and seven boys, all the boys when about four or five years of age were attacked by persistent *pityriasis palmaris*; the epidermis of the palm of the hands and of the fingers exfoliated without ceasing in long lamellæ.

Pityriasis capitis, formerly known by the name *furfura*, has, since the descriptions of WILLAN and BIETT, been separated from the affections which resemble it. It seems, however, that some confusion still exists in regard to infants, as we shall show after having described the characters of *pityriasis capitis*. The affection is a true chronic inflammation of the scalp, the chief character of which is a copious desquamation without any oozing, and more or less rapidly followed by alopecia. Itching appears to be the first symptom, the action of scratching causes at first a very small quantity of epidermic scales to fall; which, however, soon become very abundant, and are reproduced with surprising rapidity.

The furfuraceous pellicles have their seat at the base of the hair, to which they form as it were a sheath; they are dry, and scattered through the hair as if it had been powdered with bran. This affection may be confounded with the scaly period of eczema; but the latter is merely a phase of a chronic affection of the scalp, it is a transitory state, which often precedes a cure, while pityriasis has its peculiar character and progress without any notable changes; moreover the abundance of the desquamation is much more considerable in the latter affection.

There are also some resemblances between *pityriasis capitis* and squamous eczema, but in the latter the lamellæ are larger, they have not their exclusive seat at the base of the hair, and their production is not so rapid.* The alopecia also differs in pityriasis, the hairs become scanty and fall off without any very evident alteration; while in squamous eczema, they become dull and appear woolly before disappearing.

On approaching the period of puberty the disease assumes the characters met with in the adult; but during the second period of infancy the affection is frequently developed upon the anterior part of the head, extending to the forehead and the temples. We may observe it localised upon the eyelids, thence gaining the ciliary margins it causes the loss of the eyelashes and excites inflammation of the conjunctiva. This disease may also affect the lips and the mucous membrane of the mouth. Many authors refer the affections of the scalp in new-born children to *pityriasis capitis*. This error is in our opinion founded upon a crude resemblance between the scales of pityriasis and the scaly, irregular, white or reddish lamellæ, which are more or less adherent to the scalp during the first months of lactation.

The error may also be explained by the translation of the word *lactamen*, which is applied to the species of scaly crust found upon the heads of a large number of new-born children.

This affection of the scalp, which can in nowise be considered as a disease, is composed of minute scales forming a yellowish, caseous, rather thick and hard mass, deposited upon the superior and anterior part of the head. This crust sometimes forms a kind of cap, which appears to become thicker by a secretion from the scalp until it has acquired a certain consistency. After a variable time it gradually loses its adhesiveness, and there is frequently observed beneath it a kind of exudation, producing a constant humidity, with

* See note at page 133.—Ed.

a fetid odour *sui generis*. Nurses call this *milk crust*, or *cap*. Many children exhibit this kind of sebaceous covering during the whole period of lactation. When detached it soon reappears, unless friction be daily repeated. This production is not a result of disease, it is a secretion without any apparent morbid process; mothers and nurses take care not to interfere with it by too rigid cleanliness, following in this the prejudice that all affections bearing the vague and confused name of *gourmes*, should not be interfered with.

SECTION VII.—ICHTHYOSIS.

The history of ichthyosis has within a recent period been singularly abridged. Most authors admitting its identity with *accidental productions* of the skin, have placed it among *anomalies* and *monstrosities*. If it be true to say that it appears to be constituted by a morbid charge in the secretion of epidermic matter, it is not correct to limit the whole of the disease to this alone. For as in lepra and psoriasis, those affected with ichthyosis have, so to say, a suppression of cutaneous transpiration which only occurs in them in the unaffected parts. There is here, then, more than one epidermic lesion.

Ichthyosis, it is true, is often congenital, but it is likewise accidental and acquired. It is also hereditary, like other dartrous affections. Some authors say it is hereditary after the manner of monstrosities and anomalies. We reply that it is much more certainly hereditary, and that in this it resembles other dartrous affections. It is, moreover, much more frequent in certain districts than in others; Le Berry in France, for instance, contains a considerable number of cases of ichthyosis. The strongest argument which can be adduced is, that in assuming the hypothesis of a monstrosity, the physician would not try any means of cure, and yet our science furnishes undoubted instances of ichthyosis having been cured.

Ichthyosis, whether limited to a particular region or extended over almost the whole surface of the body, is characterised by a peculiar development of the epidermis, which appears corrugated and scaly, the scales resembling those of a fish. When it is general, the face, hands, feet, groins, and arm-pits are usually unaffected; and it is on these spots alone that cutaneous transpiration occurs. This disease is usually hereditary, and appears to affect a larger number of boys than of girls, it is scarcely apparent at the time of birth; however, new-born children who are subsequently affected by it, do not present so fine a skin as that of healthy infants: it appears dry and sallow. During the first few months of its existence the body is covered by minute, unequal, greyish, epidermic scales, so that the whole skin presents a rough aspect, very unusual at that age. This state of semi-ichthyosis continues sometimes for a long period, becoming more characteristic in advanced life. When the alteration is more rapid, it appears in the first or second month, and it may then assume all the characters which are retained during life. Ichthyosis varies in its anatomical characters, and in proportion as these are more or less marked, it has received different denominations. Thus authors describe three species: *ichthyosis nacrea*, *ichthyosis cornea*, and *ichthyosis cyprina*.

Ichthyosis *nacrea* commences within the first few months after birth by a furfuraceous desquamation; the epidermis is renewed many times more or less regularly, after which the characteristic scales make their appearance upon the fore-arms, legs, thighs, abdomen, &c.

These scales may be thick or thin: when thick, the tint is darker—sometimes they are imbricated like the scales of a fish. When they are thin they are generally of a pearly white colour, small, and limited by lines cutting them at right angles, like the very small natural wrinkles of the skin. These altera-

tions of the epidermis may assume the most curious and surprising aspects, so that some authors have compared the cases they had observed to the skin of the elephant, or the rhinoceros, and others to the bark of an old tree. It is especially ichthyosis cornea which has so much engaged the attention both of physicians and others, on account of these cuticular excrescences, the form of which varies according to the particular region they occupy.

Ichthyosis may be adventitious, arising from a variety of unknown causes. ALIBERT remarks that most of those affected by this disease were beggars, who had long suffered from bad food.

Ichthyosis, whether general or local, is unattended by itching, nor does it seem to occasion any marked derangement of the health, notwithstanding the obstructed cutaneous perspiration.

From the peculiar condition of the skin we might *à priori* assume that it is not liable to certain cutaneous affections; such, however, is not the case. Thus, RAYER quotes the case of a young man, twenty-three years of age, who, though suffering from general ichthyosis, fell a victim to variola. Constitutional diseases exercise an influence over the appearance of ichthyosis, which may be considerably modified by them, and reappear after their cure.

The diagnosis is never difficult; the analogy to squamous diseases, although suggested by English dermatologists, is rather remote. In the new-born child, generally within the first week, the epidermis is cast off; this exfoliation lasts but a short time, and the cutaneous tissue is not long in assuming its natural characters.

SECTION VIII.—TETTERS OF THE MUCOUS MEMBRANE.

We have already endeavoured to point out the relations of *continuity, alternation, or compensation*, which may exist between some fluent cutaneous affections and certain affections of the mucous surfaces. With reference to tetter we must bear in mind that the mucous membranes adjoining the skin participate in the same lesions. Hence, the older authors admit, the existence of *internal tetter* independent of any humoral explanation. Moreover, we constantly observe, that febrile exanthems, such as erysipelas, variola, measles, and scarlatina, affect the mucous membrane of the mouth, the eyes, the nose, &c., as much as the rest of the cutaneous system. Dr. RAYER observes that* "the lips are often attacked with herpes, and zona may extend to the inside of the mouth. The aphthæ that occur in the cavity of the mouth, and on the surface of the pharynx, appear to be analogous to one or other of the varieties of herpes. I have met with eczema confined to the mucous membranes of the lips and extending into the inside of the mouth. It also, occasionally, appears to be confined to the mucous surfaces of the nipple, of the penis, vulva, and margin of the anus. I have observed chronic and very obstinate coryza accompanied with discharge from the nostrils, and very considerable pruritus of the nasal fossæ, which were preceded by eczematous affections."

These clinical facts have been very recently confirmed by two well known authors, M.M. NOEL GUÉNEAU de MUSSY and GUBLER; by the former in his description of glandular—and by the latter in that of herpetic angina. With regard to herpetic affections of the face, considerations arise analogous to those we have expressed in treating of the impetiginous affections of the scrofulous.

We meet too often with tetter upon the scalp and face of

* *Traité théorique et pratique des Maladies de la Peau.* Tome, iii, p. 707.

children in perfect health, who have never exhibited any trace of scrofula, not to admit that in some cases they are essential, and that the attendant ophthalmia is also dartrous. This fact, moreover, is admitted clinically by German oculists, who study each affection of the eye from this point of view. This has enabled them to point out the local differences in relation to diseases of which the affections of the eye are frequently but a symptom. We have already seen that in certain impetiginous lesions of the face in scrofulous subjects, the cutaneous affection extends to the conjunctiva; something similar takes place in dartrous subjects, which Professor TROUSSEAU expresses in a striking manner, by saying, that children have dartre on the eye. Whether this herpetic affection be dartrous or scrofulous, the relations are the same, though these two species of ophthalmia present special characters. The diagnosis of these cutaneous affections being once established, the therapeutical treatment must be based upon their relations to herpes which may, following Dr. BECQUET,* be stated thus:

1st.—The cure of *ophthalmia by propagation* is connected with that of the attendant dartrous affection.

2nd.—*Ophthalmia by compensation* can only be cured by the reëstablishment of the concomitant disease.

TREATMENT OF TETTERS.

The therapeutic treatment of the cutaneous affections composing this group offers a certain similarity; hence, we shall only speak of the treatment of the principal affections, according to the identity of their indications.

A.—*Treatment of Prurigo and Lichen.* Emollient or sulphurous baths are generally prescribed in these two diseases; the combination of the former with the sulphurous baths, by the addition of gelatine to the sulphuret of potassium,

* These. Paris, 1852.

or using these baths alternately, are frequently sufficient to effect a cure.

The employment of mercurial or sulphurous ointments produces but little effect; while the use of bichloride of mercury in the form of a bath, has, on the contrary, a more energetic, salutary influence. The general remedies administered to the adult are numerous; the varieties of local prurigo are never met with in the infant, the chief medications employed in the latter are: diluents, as whey, veal broth, barley water, decoction of the *triticum repens*, lemonade, &c. If the affection persists we must act upon the bowels by calomel. Some practitioners prescribe decoctions of burdock, *fumaria*, *centaurea*, &c. Should the lichen have produced a thickening of the skin, douche and vapour baths may be employed.

Finally, we must know how to use preparations of arsenic in certain obstinate and chronic cases, though their action is said to be less energetic in papular affections than in other forms of cutaneous disease. M. CAZENAVE has we know connected, with great accuracy of observation, the history of local and general hyperæsthesia with nervous affections, in which pruritus is a real neuralgia, and at the same time a torment to the patients. But the pruriginous element exists in nearly all the cutaneous affections of the infant, without however assuming the character of that essentially nervous hyperæsthesia which is frequently observed in the adult.*

B.—Treatment of Eczema. The influence of regimen is

* We cannot say that we have found much benefit from the use of sulphur, either internally or externally, in cases of prurigo and lichen, and mucilaginous baths only relieve the itching for the moment. We strongly recommend the bath containing bichloride of mercury, used every day or every other day, at as high a temperature as it can be borne. In the intervals between the baths the parts affected should be well rubbed with the following ointment: Camphor 10 grains, hyd. chloridi 20 grains, cerat. cetacei 10 drachms. Internally, we advise the use of salines or saline aperients, such as the acetate or bitartrate of potash, for a few days, followed by tincture of the sesquichloride of iron in large doses well diluted. If the itching be very severe a small quantity of tincture of aconite may be added to the salines with great effect: we have obtained the most rapid cures by these means.—ED.

considerable in the production and cure of cutaneous diseases, and especially so in eczema. In the acute stage emollient topical applications should be employed, such as cataplasms of potato starch, which ought not to be continued too long, in order to avoid a useless maceration of the integuments. After the disappearance of the acute form, we may use slightly alkaline or saponaceous baths. M. CAZENAVE recommends us to use, as much as possible, dry, topical applications, such as starch, and rice meal, which are especially indicated in the chronic form.

M. RAYER advises us in using cataplasms in eczema of the scalp and of the skin in infants, to be careful in drying the head, and to keep it well covered during the first few days; for if this precaution be omitted, ophthalmia or otitis may supervene. In chronic cases of little intensity, eczema may yield to the administration of acidulated drinks aided by gelatinous baths. If, however, the affection be more inveterate, sulphur given internally or sea bathing may afford considerable relief. In the adult, purgatives are frequently very successful in relieving eczema, which is not the case in infants, who do not easily bear them when we are obliged to employ them many times.

In cases where this affection has produced a certain degree of hypertrophy, as often occurs in the ears, vapour douches must be used, the duration of which should not exceed a few minutes.

In eczema of small dimensions with an exaggerated tendency to oozing, tar, or better still oil of cade, either pure or combined with oils in the form of a liniment, in some cases renders the eczematous surfaces very rapidly dry; the yellow phagedenic wash composed as follows:

Bichloride of mercury . . .	0.10 centigrammes.
Lime water	20 grammes.

has the same effect. A yellow precipitate is produced of hydrated binocide of mercury; two or three table spoonfuls of this mixture are sufficient in a glass of very hot water for a lotion.—(Trousseau.)

Arsenic is also a remedy which must be resorted to in the most obstinate cases, which are only to be met with in children approaching puberty, at which period these preparations are less injurious than at any other period of infancy. In the adult, M. CAZENAVE has by their use obtained unexpected results; he prefers PEARSON'S solution, which he administers in doses of from one to four grammes daily, in a bitter or sudorific syrup.

We have witnessed considerable improvement, followed at times by a complete cure, under the influence of baths of bichloride of mercury.

C.—Treatment of Lepra and Psoriasis.—The therapeutic treatment and the regimen in these two analogous diseases must be adapted to the more or less inflammatory state of the skin. We must bear in mind that a certain number of cases of lepra and psoriasis, appear annually towards the autumn, and disappear in the spring. The frequent relapses in dartrous affections generally, and particularly in lepra and psoriasis, are well known. The remedies recommended for these affections are extremely numerous. In order to become acquainted with the principal of them they must be divided into local and general remedies. To the latter belong: tincture of cantharides, iodide of potassium, arsenical preparations, balsam of copaiba, preparations of antimony, mercury, and sulphur, purgatives and sudorifics.

Among the arsenical preparations the most frequently used are:

1st.—Fowler's solution.—*Arsenite of potash.*

2nd.—Pearson's solution.—*Arsenate of soda.*

3rd.—*The arsenical liquor of Bielt:*

Arsenate of ammonia.	4 decigrammes.
Distilled water	200 grammes.

4th.—*Asiatic pills* :

Arsenious acid	5 centigrammes.
Black pepper	60 "
Gum arabic, in powder	1 gramme. .
Water	Q .S.

Divide into twelve pills.

5th.—M. HARDY uses the following formula :

Arsenious acid	5 centigrammes.
Water	200 grammes.

Every table spoonful contains one-sixteenth of a grain of arsenious acid. We perceive how easy it is to employ the last means in children approaching adolescence, by which we may readily administer the smallest quantities of this poisonous agent. Eminent practitioners do not employ these formulæ indifferently. M. CAZENAVE, for instance, prefers FOWLER'S solution in common lepra, *psoriasis circinata*. Sometimes it is the constitution of the subject and the extent of the lesions that influence his choice. In young irritable subjects he prefers PEARSON'S solution, reserving the use of the Asiatic pills for obstinate cases. He observes, "I ordinarily prefer PEARSON'S solution as being milder and more easily managed, but it is sometimes useful to vary the different preparations, for one will often succeed where another will fail, without our being able to account for the difference which is not always in proportion to their greater or lesser absolute energy."

We are in the habit of considering infancy as an express counter-indication to the administration of arsenical preparations. Lepra and psoriasis, however, but very rarely affect young subjects before the third period of infancy. At that age, when the digestive organs are in so healthy a state that there exists a certain vigour, as most frequently happens in

dartrous subjects, we think that these preparations, administered with all the care which the gravity of possible accidents imposes on us, offer no inconvenience, at least we have never seen any supervene.

The tincture of cantharides has been commended by BIETT, of the Hospital Saint Louis. There are three tinctures: the ethereal, the alcoholic, and the acetic tincture. The alcoholic tincture alone is given internally; we commence with two or three drops daily in a julep. This medicine requires close watching on account of the special action of the cantharidine on the genito-urinary organs. Messrs. TROUSSEAU and PIDOUX* observe that this medicament acts better and more promptly on women, and young, sanguine, and active subjects, than upon the debilitated.

Preparations of sulphur act favourably in certain mild forms of psoriasis, whilst they appear perfectly inert in obstinate and inveterate cases.

Purgatives and sudorific medicines play but a secondary part in the treatment of these diseases, or rather they are only employed as adjuvants more or less necessary in some individual cases. Antimonial and mercurial preparations are also but little employed, their favourable action being at least doubtful.

This is not the case with regard to a mode of treatment recently discovered by Professor HARDY. We allude to the administration of the balsam of copaiba internally in cases of psoriasis. M. DUPUY, one of the pupils of the eminent physician of the Hospital of Saint Louis, published in 1857 a thesis from which we borrow the following details. M. HARDY commences with a dose of about three grammes, which in the course of the treatment he increases to four or six grammes. The copaiba is given before breakfast and in the interval between the meals. In twelve cases which were

* *Traité de Thérapeutique et de Matière Médicale.* Paris, 1857.

rapidly cured in one year, M. DUPUY has noted the phenomena resulting from the action of copaiba. Once only was the colour of the scales altered. When the epidermic scales fell off, the subjacent skin was generally healthy, sometimes still a little red. In one case a kind of partial vitiligo attended the fall of the scales; psoriasis in patches is converted into psoriasis circinata, the cure commences in the centre of the patch, and the circinate variety is transformed into psoriasis guttata. In dartrous affections the cure seems to proceed from above downward, in psoriasis treated by copaiba this is not the case. The amelioration is often more marked on the inferior than on the superior extremities; the amendment shows itself at first in the most slightly affected spots, and thence it converges, so to speak, to the place of election. A diarrhoea, almost always very well supported by the patients, supervened in two-thirds of the cases. The erythema sometimes consequent upon the administration of copaiba supervened but once.

Dr. DUPUY arrives in his thesis at the following conclusions:

The balsam of copaiba seems to be superior to topical and arsenical treatment as regards the local lesions.

Its influence upon the diathesis remains still to be determined.

Topical treatment should generally be combined with it, but it may in certain cases be omitted.

Some cases of psoriasis resist the action of copaiba as well as that of all other remedies.

Relapse may occur after a cure by means of copaiba.

The balsam of copaiba does not cure by the law of similars, nor by any irritant, substitutive, or derivative action.

The balsam of copaiba cures psoriasis by a specific action.

The external treatment comprises the various ointments, baths, and hydrotherapeia.

ts are those containing tar, oil of
and the alkaline, sulphurous and
g others the iodide and chloride
(D), finally the white ointments

ated, and vapour baths are powerful adju-
the treatment of lepra and psoriasis. Simple baths
y be rendered more emollient by the addition of gelatine
or starch, they soothe the irritability of the skin in the acute
form, and should be used for a long time, and aided by the
application of greasy substances with which the diseased
parts should be slightly anointed.

Among the natural sulphurous baths most recommended
are those of Barèges, Bagnères de Luchon, Aix-la-Chapelle,
Urriage, &c. Vapour baths, by stimulating the cutaneous
functions, are very powerful auxiliaries.

Finally we have witnessed rapid recoveries in the Hospital
for Sick Children, by the daily use of baths of bichloride of
mercury.

D.—Treatment of Pityriasis.—General pityriasis is very
rarely seen in children; even that of the scalp, although more
common, is not very often met with. In general, emollient
lotions or ointments, made with hog's lard, aided by alkaline
or vapour baths, are sufficient to effect a cure. Frequent irrita-
tion by combing the hair should above all things be avoided.

When pityriasis is obstinate CAZENAVE advises the employ-
ment of douches on the head by means of a minutely
perforated vase, to be continued for ten minutes, varying the
composition of the water according to the more or less
inflamed state of the scalp. He also uses with equal advan-
tage the following ointment:

Calomel	2 grammes.
Camphor	20 "
Hog's lard	30 "

Or,

Flour of sulphur	4 grammes.
Galen's cerate	30 „

The inunctions should be made in the evening, and the parts washed in the morning with slightly saponaceous or with tepid water.*†

E.—Treatment of Ichthyosis.—For general ichthyosis, emollient applications long continued, gentle friction, mucilaginous and soothing lotions, tepid baths frequently repeated or alternated with vapour or alkaline baths, so as not to produce any derangement in the exercise of the principal functions, may be advantageously employed in removing from the skin the scales which cover it, and in maintaining it in a state approaching its natural organisation. BATEMAN has unsuccessfully tried plasters, lotions, and topical stimulants in general ichthyosis. Mr. COULSON seems to have been more successful with lotions of corrosive sublimate. The skin, in his case, became hard and tense. After the lapse of a week, the lotions were replaced by a liniment composed of ointment of nitrate of mercury and an ounce of olive oil applied three times daily. A cure was effected.—(RAYER: *Maladies de la Peau*.)

BATEMAN assures us that a young girl, affected with slight scales upon the scalp, the shoulders, and the arms, was cured by the arsenical solution, and that in two other cases this preparation had been tried without success.—(RAYER.)

* *Traité des maladies du Cuir Chevelu*. Paris, 1850; pp. 181, 182.

† Local pityriasis may almost always be speedily cured by the application of alkaline ointments or lotions for a few days in order to remove the scales completely, and afterwards dressing the denuded parts with liniments or ointments containing the oil of cade.—(ED.)

SIXTH CLASS.—PARASITICAL DISEASES.

Vegetable and animal parasites constitute in man a group of cutaneous affections so nearly resembling each other that they are naturally comprehended in one group. Dr. BAZIN was one of the first who, leaving the narrow path of dermatologists, has studied diseases of the skin from their true nosological point of view, and has shown in a recent remarkable work* the great services rendered to science by the microscope. Owing to the labours of this author, continued for the space of ten years in a large special hospital, we are now enabled to assign to parasitical affections their legitimate limits. Doing justice to the theory of spontaneous generation, he has shown us the nature of various parasites, and at the same time their energetic contagious action. And though it may in truth be admitted that the contagion of these parasites operates more actively under the influence of certain morbid conditions, yet we cannot fail to recognise how powerful their contagion is in healthy and vigorous subjects. It has been asserted that in animals parasites frequently attack diseased flocks; but it is equally certain—as has been shown by many authors, amongst others by my former colleague, LEMAISTRE, of Limoges—that certain parasites attack the most vigorous and healthy of the bovine tribe, when contagion has been possible. This seems also to be the case in man; for, as we have already frequently observed, contagions, of whatever kind they may be, manifest their

* *Leçons théoriques et cliniques sur les affections cutanées Parasitaires*: BAZIN. Paris, 1858; with plates.

greatest intensity in infancy. Hence we meet with a greater number of parasitical diseases in children than in adults.

It has been argued that there exists an aptitude, or a predisposition, to the attacks of parasites, without which they would not be developed. Such a predisposition exists in regard to any kind of virus. Thus there are individuals who resist any contagion, and even inoculation; but these facts do not deprive parasites of their importance as *causes*, as symptoms, and as lesions. As in the majority of contagious affections, the effects produced by parasites are more serious in proportion as the general health is impaired by previous disease. It is therefore no exaggeration to say that with the destruction of the parasite the whole disease is destroyed at the same time.

Parasites are distinguished as vegetable and animal parasites. These two orders of parasites provoke, besides the symptoms peculiar to each of them, a great variety of symptomatic eruptions which may be without any regularity in their mode of production. However, these symptomatic eruptions are, most frequently, more extensive and serious the older and more intense the parasitical affection is. Numerous cases exist of what has been called parasitical cachexia—a serious condition in which the progressive extension of the parasite undermines the constitution of the patient, who at length sinks into a state of fatal marasmus: these fatal terminations are henceforth impossible, and this should not be one of the least titles to distinction of the skilful physician of Saint Louis. Long before parasitical diseases were as well known as they are now, it had been observed that some of them, as the itch and favus, appeared to be suspended during the progress of severe fevers. In most cases their disappearance is only apparent, and the parasitical disease resumes its original intensity after the recovery of the patient in proportion as he regains his previous strength and condition.

VEGETABLE PARASITES.

Among the vegetable parasites which excite parasitical affections in the child, we shall describe the three following principal forms:

Favus,
Herpes Tonsurans,
Porrigo.

SECTION I.—FAVUS.

The pathogenic and therapeutic history of favus seems to have been rendered complete by the admirable researches of Dr. BAZIN. This protracted and painful affection is actually the most rapidly curable of its class. Dr. BAZIN thus defines this disease: "It is an affection of the scalp, characterised by yellowish incrustations, more or less thick, dry and rough, of a peculiar odour, sometimes irregularly disposed, at other times, on the contrary, depressed in the form of cups with a remarkable regularity."

He describes three periods in the progress of favus. In the first the initial symptom is pruritus, after which an erythematous redness supervenes upon the surfaces attacked by the fungus, this is followed by a slight epidermic desquamation; sometimes a pustular eruption of short duration precedes the appearance of the favous cups. The hairs are altered; they become dull and may easily be pulled out without offering the usual resistance. In the second period the parasite appears in the form of yellow concretions. The pruritus persists; the hairs become more and more altered, and at length they fall off spontaneously; in some cases various symptomatic eruptions appear at this period. In the third period the piliferous tubes are obliterated, whence incurable alopecia results. The parasite then disappears from want of a favourable locality for its growth. It

sometimes happens that, notwithstanding the disappearance of the cryptogamic parasite, the crusts remain attached for a certain time to the scalp.

The vegetable parasite constituting favus is, by microscopists, termed *Achorion Schoenleinii*, in honour of its discoverer, SCHÖNLEIN. M. GRUBY subsequently suspected the presence of a fungus in the interior of the hair follicle; a fact confirmed by BAZIN, who also demonstrated the existence of a parasite upon the root of the hair, and in the piliferous canal. These facts exactly account for all the phases of this protracted disease, and give satisfactory solutions, instead of the numerous theoretical explanations that have been formed, as to the seat and nature of favus.

Dr. BAZIN recognizes three principal species of favus, founded upon their external aspect: *urceolar*, *scutiform*, and *squamous favus*.

We do not intend to describe these forms at length, and shall only present their salient characters, referring the reader to the above-mentioned excellent work, where he will find complete micrographic and nosographic details.

After the termination of the first period, that is to say, after the disappearance of the erythema, or of the pustules, which may indicate the presence of favus, we see the latter appear. It shows itself in the form of a very small yellow spot with a central depression, traversed by a hair. This cup, once formed, grows rapidly, exhibiting more and more its central depression, and it may thus attain, without changing its form, one and a half centimeters in depth, and two centimeters in breadth. It may, until then, be encased between two epidermic lamellæ, of which the superficial one is easily perceived, and is soon broken by the eccentric pressure of the fungus. The other epidermic pellicle lines its deep surface, and is very thin and transparent; it covers the dermis, the minute subjacent bloodvessels of

which may be seen on removing the favus. After the fungus has broken the external epidermic envelope, it loses its regular cup-shape. When these cups are very near each other they become very irregular. The hairs are altered, fall out, and are finally no longer reproduced, the hair bulbs being either atrophied or completely destroyed. M. BAZIN has shown that the pilous papilla is frequently not destroyed, but that in consequence of a special alteration it secretes epidermic, and not pigment cells. When the hairs have fallen off the parasite is not long in disappearing: the skin of the scalp then presents an indelible aspect, easy to recognise: it becomes glossy, tense, and very thin.

Favus generally has its seat upon the scalp, but it may, in the child as well as in the adult, occupy the trunk and the limbs. This difference in situation causes a difference in aspect, as explained by Dr. BAZIN. Thus when the fungus is developed upon a region where the hairs are separate, the cup is regular in shape, and preserves its form for a long time. When, on the contrary, the hairs are very near each other, the form is altered in the depth of the skin. Hence BAZIN terms the first form of favus *urceolar*, and the second *scutiform*, as demonstrated by the transformation of one form into another by depilation.

That variety called by Dr. BAZIN squamous favus offers a great resemblance to *impetigo granulata*.

The external evolution of the fungus is more irregular; it takes place upon unequal surfaces, and not circular as in the preceding forms. The matter of the favus shows itself more upon the stem of the hair, where it forms sheaths, which may adhere strongly to each other.

The *Achorion Schcenleini* may also attack the nails, rendering them thick and yellow. Their longitudinal striæ become more distinct, and seem to separate from each other. The unguis lamellæ become unequal, embossed, and in many

places they present an attenuation which becomes more and more marked from the action of the subjacent fungus, until the perforation of the nail is completed. These cases are so frequent that M. BAZIN had within a few months several of them under his care. This affection is chiefly consecutive to favus. The patients scratch themselves, and some portions of the fungus are introduced beneath the nail, and finding there, in the soft cells of the epidermis, a favourable locality, they are developed and produce the disease.

When favus occupies spaces of greater or less extent on the scalp, and presents itself with its yellow colour, cup-shaped cavity, and rounded form, the diagnosis is very easy. But sometimes it becomes difficult. Thus, for example, we must recollect that in impetigo of the scalp the dry and hard crusts may present the sulphur-yellow colour. But generally, even in very old favus, we find, on examination, some yellow spots showing the cup, which removes any doubt, especially when attended by the peculiar odour, although the latter alone cannot give us an absolute certainty. The examination of the hair suffices sometimes to establish the diagnosis, this alteration consists of a peculiar state of dryness and discolouration, which is easily observed in the midst of the healthy hair. The indelible cicatrices of favus upon the scalp are, in difficult cases, an excellent guide.

The circular form of herpes tonsurans leaves no room for uncertainty; the broken hairs and the colour of the scalp are sufficient to establish differences, even when the trichophyton has caused symptomatic eruptions resembling those of favus.

Finally, it must be stated that these contagious parasitical affections by no means exclude each other, and that we may meet with patients simultaneously affected with several forms.

SECTION II.—HERPES TONSURANS.

Tinea, or herpes tonsurans, is doubtless the most common parasitical disease of the scalp among children. It is much more frequent among them than among adults. In the latter this species of herpes, as BAZIN has shown, assumes other aspects and has a different progress, under the names of herpes circinatus, and of sycosis, or mentagra, an affection which that author has classed among parasitical diseases by demonstrating the unity of the cause—the vegetable parasite termed *trichophyton*.

Tinea tonsurans seems to have been observed at a very early period; but it has only latterly been properly isolated and studied, first by MAHON, then by CAZENAVE, who has recognised it under various denominations, such as *porrigo scutulata*, *ring-worm*, by the English; *porrigo tonsurans*, by ALIBERT, &c.; and *herpes tonsurans*, as designated by himself.

This contagious disease is essentially constituted by a vegetable parasite, and is characterised on the scalp (which it selects by preference) by patches of variable dimensions, rounded, grey in colour, upon which the hairs are scanty and broken off so near to the skin that they seem to have been cut off by a pair of scissors. These patches have a striking resemblance to what is called a *tonsure*. They commence with a small spot, which continually enlarges until round patches are formed which may attain the dimensions of the palm of the hand. The spot is red and the seat of slight itching; it is covered by very delicate and transitory vesicles; hence the existence of a slight desquamation, which may persist for a long time. The scalp becomes rugous and dry upon the surface, whilst the hairs break off at two or three millimeters from the skin, and each stump of hair is enveloped by a kind of white sheath. M. BAZIN has demonstrated that this *epidermic sheath* is

formed by the vegetation of the cryptogamous parasite itself. The structure of the hair is completely altered, the central canal has disappeared, and its elements appear to be separated.

M. GRUBY discovered in 1844 the vegetable parasite of herpes tonsurans, which after having received different names is now known by that of *trichophyton tonsurans*. This cryptogamous parasite occupies at the outset the interior of the root of the hair in the form of rounded spores. These, multiplying in the internal substance of the hair, grow with it, and finally emerge from the follicle. The whole thickness of the hair being thus completely invaded, it breaks off either within or without the follicle. In the first case, according to M. CHARLES ROBIN, the epidermis and the sebaceous matter fill up the extremity of the piliferous canal, constituting a kind of operculum, which the hair is not long in raising up. In this manner the small eminences are formed which cover the patches of herpes tonsurans.

When the hair is broken in its free part, the fungus envelopes it with a white, glossy sheath, perfectly visible to the naked eye. The accuracy of these facts is fully established by the labours of MM. BAZIN, C. ROBIN.—(Van GEVER, 1856.)

The patches of herpes tonsurans may be more or less numerous upon the scalp, but it sometimes happens that, in consequence of an eccentric development of some of them, they conjointly occupy a large portion of the scalp. Then we only find small healthy surfaces which are not bald, and where the hair presents its normal character.

Upon the diseased parts of the scalp the hair, before breaking, presents a discolouration, attended with dryness, analogous to that observed in favus. The patches of herpes tonsurans have not always the same aspect. At first they are grey, with a slight vesicular eruption which is more or

less fugacious; at a more advanced period they are of a bluish grey, with small eminences giving the skin a rough appearance; at a period still more advanced, inflammatory lesions may, as in all parasitical affections, supervene, under the irritating influence of the fungus, such as pustules, or small abscesses, which sometimes render the diagnosis somewhat difficult.

The progress of herpes tonsurans seems in no wise influenced by the seasons. The diagnosis of this affection is generally easy, though it presents some characters resembling those of other affections of the scalp. The round form of the patches resembles that of psoriasis and lepra; but these two diseases are rarely seen upon the scalp, and, besides, their large, dry, hard, pearly, and sparkling scales distinguish them sufficiently from herpes tonsurans, where the hair appears as if shaved off, and where there is not alopecia, but merely a tonsure.

Squamous eczema of the scalp might sometimes be mistaken for herpes tonsurans, but there is always in the former, at a certain period, a humidity, which is constantly absent in the latter. In herpes the patches are regularly rounded, while they are irregular in eczema, the secretion of which consists of soft yellowish scales, differing from the slight furfuraceous desquamation of herpes.

The disease which presents the greatest external analogy to it is that called *favus* in rings, which has, by English authors, evidently been confounded with herpes tonsurans. The patches of this kind of favus are never so accurately limited as those of herpes; in the latter they are of a bluish grey colour, farinaceous, and finely granular. In favus they are unequal and rough, the scales are larger, dry, and more brilliant; the existence of favus is, moreover, pathognomonic, and always possible to determine.

Porriago cannot, as we shall afterwards show, create any

serious doubt; it is sufficient to mention the complete discolouration of its bald, smooth patches to avoid the possibility of error.

The prognosis of herpes tonsurans is not serious; its importance is owing to its duration, which is now pretty well ascertained. It is known how much reliance has been placed on the curative action of certain topical applications which have effected a rapid cure in some cases, and completely failed in others. My excellent teacher, LEGENDRE, after many experiments, was not long in finding out the secret of these successes and failures. Thus VAN GAVER, in his treatise on herpes tonsurans (1856), observes that LEGENDRE looked at the treatment of this disease as merely palliative, and that a cure is only effected by a natural evolution. The last time I saw this meritorious observer in the Hospital Sainte Eugenie, he assured me that the total duration of herpes tonsurans did not exceed nine months. These assertions, proceeding from such an authority as LEGENDRE, have been confirmed by Dr. SÉE, who obligingly showed me, in the Hospital for Sick Children, cases of herpes tonsurans which have resisted and continued their period of existence, notwithstanding the application of lotions and other remedies.

Dr. BAZIN, on the contrary, is of opinion that herpes tonsurans, left to the resources of nature, may be indefinitely prolonged. While admitting the possibility of a spontaneous cure, he asserts that it has a very long existence, and that it is not rare to see it last for more than eighteen months.

SECTION III.—PORRIGO.

Dr. BAZIN has described, under the denomination of *teign pelade*, borrowed from the authors of the sixteenth and seventeenth centuries, a variety of cutaneous affections hitherto imperfectly known, the principal of which are *vitiligo*, *porrigo*

décalvans, *leucopathia*, &c. This disease has always for its cause the presence of a cryptogamous parasite, the *microsporon Audouini*, which, like the other fungi, may live at the expense of the hair, the epidermis, and the nails.

The disease comprises two forms: the *peladea chromateuse*, and the *pelade décalvans*. The commencement of these two forms of the same parasitical disease is marked by itching. The hairs are variously altered: sometimes the alteration is considerable, whilst at other times the hairs are only slightly discoloured, reddish, and powdered. At a more advanced period the fungus appears in the form of a grey down, not very abundant. At the same time the scalp presents a peculiar hypertrophy, the hairs fall off and grow again in succession until they resemble the slight down observed upon different parts of the body of children. At length, in the more advanced stage—the third period—the hairs are no longer reproduced, the diseased parts shrink, the white, feculent down formed by the parasite soon disappears, and the alopecia is then incurable. *Achromatous porrigo* is the porrigo decalvans of BATEMAN—the *vitiligo* of CAZENAVE. In this variety the hairs have in the first period a dull appearance; they are discoloured, fine, and altered, sometimes reddish, which is never seen in non-dermophytic vitiligo. In the second period discoloured patches, usually oval, appear and are deprived of their hair. They are of a milk-white colour; they multiply, and, enlarging, denude more or less the whole scalp.

The *porrigo decalvans* has a more rapid course than the preceding variety. It is distinguished from it by a hypersecretion of the epidermis and a less marked alteration of the hair at its commencement; but when the fungus appears they fall off, leaving large, irregular, sinuous, denuded patches, the skin of which has its normal colour.

These two species, which may be met with upon the same

head, have two modes of termination—confirmed alopecia, and spontaneous recovery. The latter mode is more frequently observed in the achromatous variety, while alopecia is more frequently the consequence of the one we are now describing. Dr. BAZIN, who probably has something more to say in respect to this curious parasitical affection, thinks that the prognosis of porrigo is more serious than that of any other contagious affection of the scalp, though it does not affect the general health; but it may spread, and involve the whole pilous system. The cure is always difficult, requiring a long time, especially if the disease be old.

The diagnosis can, in children only, offer difficulties in regard to what has been described under the name of simple vitiligo, which is but a dyschromatous affection of the skin without parasites. In the latter the discoloured surfaces have not usually the oval or circular form; around these white spots deprived of their pigment, there exists a deeper colour of the skin, a kind of hyper-secretion of pigment, which is not seen in porrigo. In the latter, on the contrary, the pigment is destroyed by the parasite, and not attracted by the surrounding parts. The alopecia succeeding favus might lead us to suspect the existence of porrigo, but in favus the skin is of a natural colour, transparent, and when the crusts have not long fallen off we may always recognise the tissue of superficial cicatrices. In the achromatous variety of porrigo, on the contrary, the skin neither presents the aspect nor the thin appearance of a cicatricial tissue, and it has a remarkable milky colour.

It is sufficient to bear in mind the deep colour of herpes tonsurans to distinguish it from porrigo, the discolouration of which is one of its prominent characters.

ANIMAL PARASITES.

Of the parasitical diseases caused in children by animal parasites, we shall only describe scabies and the pedicular disease.

SECTION IV.—SCABIES—ITCH.

Itch is a contagious disease, caused by the presence of a parasitical animal called *acarus*. The presence of this animal upon the skin, and the symptoms it provokes, constitute the affection called itch. The usual symptoms are: a pruritus more or less intense, and the appearance of acuminate, transparent vesicles, at the base of which we may observe small linear tracks channelled in the thickness of the skin, and terminating in a swelling, within which we may find the *acarus*. The itching is usually the first symptom which reveals the infection. In the adult, from eight to fourteen days may elapse between the moment of contagion and the appearance of the disease. In the infant, on the contrary, the pruritus and the vesicles appear four or five days after infection. The vesicles appear first upon the spots where the contact has taken place; but the places of election are usually between the fingers, the folds of the articulations, and the abdomen. These vesicles are generally acuminate, transparent at the top, and in the child often very rosy at the base. They are filled with a limpid serum, and most frequently they are few in number. When they provoke intense itching, they are soon broken by the action of the nails. The liquid which flows from them, concretes in the form of thin, flattened, slightly adhesive crusts, which may, however, at certain times assume the aspect of the crusts of prurigo. In children possessing a sensitive skin it often happens that the presence of acari in large numbers provokes not merely a vesicular eruption, besides which the insect

establishes itself and multiplies—but large pustules which may give rise to an erroneous diagnosis. At other times the cutaneous irritation caused by the parasite may cause the appearance of true papulæ; and we not unfrequently meet with cases in which the acarus has been the cause of the simultaneous appearance of all these elementary forms. The aspect of the patients is frequently peculiar in these cases. Under constant irritation from a pruritus which is increased during the night, the patients lacerate the skin which becomes covered with vesicular, pustular, and papular eruptions. The skin becomes thickened, and were it not that the presence of the acarus can be easily detected, the diagnosis would become difficult. We have never seen scabies of the penis in children, described in 1850 by Dr. PROGEY. There exist, however, some peculiarities with regard to the seat of the itch in children, especially in the new-born, in whom it frequently appears on the buttocks, where the sulci, the characteristic mark of the presence of the acarus, may be seen. The duration of scabies may be very long unless the insect be destroyed. There are instances of an almost complete suspension of itch during the course of an acute disease, which after its disappearance allows the symptoms produced by the parasite to reappear.

Notwithstanding some rare examples of extraordinary general symptoms produced by the itch, we may say that its prognosis is extremely favourable; the destruction of the parasite being so easy to accomplish.

The diagnosis of this parasitical affection is not always so simple as we might be inclined to believe.

The presence of the acarus, which is usually very easy to detect, is at other times exceedingly difficult, and without the aid of the moveable microscope very embarrassing.

Myopic eyes are frequently capable of detecting the acarus and what are termed the sulci of the acarus, without the aid of instruments.

These sulci are, in fact, furrows hollowed out of the thickness of the epidermis, the roof of which is marked by a straight or curved line leading to a brilliant pearly point formed by the female acarus. This is generally situated in the vicinity of the vesicle. Scabies can only be confounded with *eczema simplex*, prurigo, and lichen. With regard to eczema, the error cannot be of long duration. Though the latter may consist of distinct vesicles, they are small, flattened, white, or red, and are most frequently situated near to each other; while in itch the vesicles are transparent at the summit and rosy at the base, especially in infants, and they are disseminated in the places of election of the acarus.

Scabies cannot be confounded with prurigo, though this error has been often committed. It may be easily avoided by bearing in mind, as also with respect to eczema, the importance of the *sulci*, which only exist in itch, and that the black, dry crusts of prurigo show themselves chiefly upon the external surface of the limbs, back, &c. The papulæ of prurigo may, it is true, be produced in itch, but on examination there will be found a larger number of coexisting vesicles. Finally, prurigo excites, even in children, a more intense pruritus with more intense exacerbations, than scabies. This is also the case with *lichen simplex*, which is characterised by small papulæ of the colour of the skin. When it appears upon the hands it may resemble itch; but even then it affects their dorsal surface. Finally, the contagious character of the parasitical affection furnishes an element of diagnosis in cases where the acarus and its cuniculi are not very evident without the aid of instruments. We must also recollect that in children whose skin is irritable a vesicular or pustular eruption sometimes supervenes after the existence of itch, which might lead us to suppose that a relapse had occurred.

In the child, more frequently, perhaps, than in the adult, itch is complicated with true pustules, resembling those of

impetigo; as in the adult our attention must be directed to the seat of these pustules, or the localities usually selected by the itch.*

Every one knows the phases of the history of the acarus. It was clearly indicated by MORGAGNI, and had been almost entirely forgotten, and was afterwards again pointed out by RENUCCI in the wards of ALIBERT. Patient and skilful observers have latterly made this insect the subject of their researches (BOURGUIGNON); and in 1852 M. LANGUETIN, a pupil at the Hospital Saint Louis, discovered the male acarus, distinguished by its agility and its size being less than that of the female acarus.

* The diagnosis of scabies can only be made *with certainty* by the discovery of the acari, their cuniculi, or their ova.

The cuniculi are generally most readily discovered on the lateral surfaces of the fingers. They are most frequent in the papular forms of the disease, and less frequent in the vesicular and pustular forms; and it sometimes happens that none can be detected, even after the most careful search.

The ova of the acari may be frequently discovered by detaching some of the epidermic scales from the vicinity of the eruption, and examining them under the microscope.

When neither the acari, nor the cuniculi, or ova can be discovered, the diagnosis must be founded on the variety and situation of the eruption, and on the fact of its contagious or non-contagious nature.

Scabies may be accompanied by papular, vesicular, or pustular eruptions; by furuncles, and even by true abscesses.

The papular eruptions are either lichen or prurigo; the latter is most frequent, and is extremely common—probably more common than any other form of eruption.

The vesicular eruption is either eczematous, or consists of the peculiar vesicles which are characteristic of the disease. The latter are by far the most common. They are, in many situations, rather papulo-vesicles than simple vesicles, and the scales of epidermis around their base present a loosened appearance. Their other characters are well described in the text.

The pustular eruption may be either impetigo or ecthyma, the latter being by far the most common.

The papular eruption is most frequently found on the hands, the forearms, the abdomen, and the inner surface of the thighs.

The vesicular eruption is especially met with on the lateral surface of the fingers and the inter-digital commissures, the anterior surface of the wrists, around the ankles, and on the feet.

The pustular eruption is generally found on the hands, feet, thighs, and buttocks.

The concurrence of any of these eruptions, in the absence of more certain evidence, will generally be sufficient to establish the diagnosis with sufficient certainty. In infants at the breast, the eruption symptomatic of the disease generally appears in the first instance on the buttocks, to which part the acari have been transferred from the hand of the nurse.—ED.

SECTION V.—PEDICULAR DISEASE.

The pedicular affection in the child is confined to the presence of the *pediculus capitis*. The *pediculus corporis* is rarely observed, and the *pediculus pubis* is never met with, in infants.

The *pediculus capitis* is very frequent in childhood; it does not often cause any inconvenience, and is easily removed by attention to cleanliness; it, however, very frequently complicates a considerable number of scalp affections, such as *impetigo* and *favus*. In the latter the *pediculi* propagate with astonishing rapidity, so that hundreds of them may be seen moving between the crusts and the hair, which seems sometimes entirely covered with them.

The symptoms of the pedicular affection are the presence of nits and lice, which cause considerable itching. We know that formerly the possibility of the spontaneous generation of these insects was readily believed in, and many deaths were ascribed to this disease. This parasitical affection is but of slight importance, but it is always advisable to attack it by the application of Neapolitan ointment, or by lotions with *staphysagria*.

TREATMENT OF PARASITICAL DISEASES.

The treatment of these diseases has, owing to the meritorious researches of Dr. BAZIN, been rendered singularly simple and efficacious; so true is it that therapeutics can only progress in proportion as our knowledge of morbid causes and pathological facts advances. This able practitioner comprises the treatment of parasitical diseases under three indications:

- 1.—To destroy the parasite.
- 2.—To combat the inflammatory eruption caused directly or indirectly by the presence of the parasite.

3.—To combat the constitutional eruptions which may complicate parasitical affections.

A.—Parasiticides can only be applied externally. They are distinguished as phyticides or insecticides, according as they destroy vegetable or animal parasites. Some preparations—as corrosive sublimate, oil of cade, staphysagria, Roman camomile—act both as phyticides and insecticides. M. BAZIN gives the preference to oil of cade, corrosive sublimate, and turbith mineral as phyticides. He has abandoned the use of preparations of copper, on account of the particular eruptions which they are apt to produce.

The first rank among the insecticides he assigns to sulphur, then oil of cade, and staphysagria. These agents are mixed either with water, oil of sweet almonds, glycerine, or hog's lard. BAZIN is of opinion that one-tenth of the parasiticide substance is sufficient to destroy all animal parasites, whilst one-hundredth part only is requisite for the destruction of vegetable parasites. He advises us to keep within these proportions, as by diminishing them we might fail in our object, or uselessly irritate the patient by increasing them.

Before the instructions given by the physician of the Hospital of Saint Louis, the treatment was confined to the external application of parasiticides which thus only destroyed the external part of the fungus, leaving in the intracutaneous part of the hair and in the follicle the producing element of the disease. Hence results the necessity of *depilation*, which now constitutes the most efficient means of cure in every kind of contagious disease of the scalp.

B.—The inflammatory eruptions symptomatic of parasites are combated chiefly by emollients and resolvents—such as cold cataplasms, ointments containing calomel or oxide of zinc, lead lotions, bran baths, starch, vapour douches, &c.

C.—Sometimes certain darts and scrofulous eruptions

exist, concurrently with parasitical affections, these may be treated while destroying the parasite. M. BAZIN directs the attention of practitioners to the mutual influence which these pathological phenomena have upon each other in respect of their duration.

A.—Treatment of Favus.—Before M. BAZIN published his works, numerous but unsuccessful attempts had been made to cure favus rapidly, so that, even in the hospitals of Paris, the patients were confided to empirics professing to be in possession of a secret remedy. At present this obstinate affection of the scalp is very amenable to treatment. Dr. BAZIN's method is shortly as follows: The hair must be cut to the level of the crusts, and the head anointed, by means of a soft brush, with oil of cade; a poultice of potatoe starch is then applied; after which a sulphur or starch bath is prepared, into which the patient plunges his head several times. When the crusts are sufficiently softened, they may be very gently detached by the comb; after which operation the oil of cade must be immediately applied again.

On the succeeding day, depilation should be resorted to, aided by repeated applications of lotions containing bichloride of mercury.

The depilation is effected by means of fine forceps capable of grasping one or several hairs, so that they may be pulled out without breaking. This manipulation requires some practice. With a little dexterity, it may be rapidly effected, so as not to cause too much suffering. The hairs should always be pulled out in the direction of their implantation.

The depilation must be continued at different sittings, according to the sensibility of the patient. We should go a little beyond the diseased surfaces, for fear that the roots of the adjoining hair are already affected. The depilated

surfaces must be covered night and morning with an ointment of turbith mineral.

This treatment is to be continued for about a month, after which time the favus may reappear, preceded by pustules and redness of the scalp. A new depilation, more or less general, followed by the same treatment, is then requisite. After a certain time some favous crusts may still appear, which necessitate one or two partial depilations.

After the cure, confirmed by the lapse of a certain time, it is still requisite to be on the watch for the reappearance of favus, which requires immediate depilation. Generally speaking, a steady cure, without any danger of relapse, is effected by two general and one or two partial depilations.

Dr. BAZIN gives the preference to the two following formulæ:

1.—*Turbith ointment*:

Hog's lard	15 grammes.
Almond oil	2 „
Turbith mineral0.50 centigrammes.

2.—*Oil of cade ointment*:

Hog's lard	20 grammes.
Oil of cade	2 „

B.—Treatment of Herpes Tonsurans.—Dr. BAZIN adopts, in this parasitical disease, a different treatment, according as it occupies the scalp or the skin. In the latter case it is, as we have seen, according to this author, nothing else but herpes circinatus and its varieties. This opinion, now sufficiently demonstrated, accounts for the phenomenon of contagion, hitherto unexplained; but when herpes tonsurans appears upon a part of the skin where the pilous follicles are but scanty, the parasite soon perishes. The disease is then far from being as obstinate as it is on the scalp; we shall, therefore, confine ourselves chiefly to the

latter. The parasite of this species of herpes is destroyed by the same means as that of favus, viz., by depilation and parasitocides. The depilation is, however, here attended with difficulties which do not occur in favus: the hairs are so brittle that they break under the forceps, and it is only with considerable trouble that, after five or six imperfect depilations, we succeed in pulling the hair out with their intracutaneous parts. After these depilatory manipulations, the parasitocides must be vigorously applied, as in the preceding form of tinea.

C.—Treatment of Porriigo.—The same treatment, by the same means, is to be adopted in this disease; but the difficulty of depilation is here still greater than in herpes tonsurans. It is only by persevering attempts that we succeed in depriving the diseased parts of the slight down which is with difficulty seized by the forceps. The depilation must only be discontinued when the hairs gain their vigour and their normal aspect.

D.—Treatment of Scabies.—The indications are the same as in vegetable parasites, viz., to destroy the parasite and to combat the symptomatic eruptions.

The treatment of this disease formerly lasted a great length of time. In 1840, M. BAZIN, relying on the truth that in order to destroy the parasite it must be brought into contact with the destructive agent, recommended general friction for the cure of scabies. By this means he reduced the time required for the cure by two or three days. All the parts of the body (the head excepted, where the acarus is never seen) must be vigorously rubbed for twenty-five minutes with 125 grammes of HELMERICK'S ointment.* Two frictions are to be made in this manner at an interval of six

* HELMERICK'S ointment is thus composed:

Sulphur	Four drachms.
Subcarbonate of potash	Two "
Lard	Two ounces.—Ed.

hours. The following morning, or the next morning but one, the patient should have a bath, and the cure will be completed. M. HARDY, some few years after, having the charge of the sick patients in the Hospital Saint Louis, reduced the treatment still further. Instead of two frictions with HELMERICK'S ointment, he only used one, which was, however, preceded by a general friction with black soap. Between these two frictions the patient had a bath. In order to prevent relapses, the linen and clothes of the patient should be subjected to sulphurous fumigations.*

* The treatment of scabies may be considered under two heads.

- (1) That necessary for the destruction of the acarus and the removal of its ova.
- (2) That required for the relief of the itching and the various symptomatic and secondary eruptions which are produced by the disease or by the means used for its cure.

If the child is seen in the early stages of the disease and before any of the secondary eruptions have appeared, it should be, in the first place, washed all over with plenty of ordinary soap and water, for twenty minutes or half-an-hour: on the hands and feet, the folds of the nates, the perineum, the groins, the popliteal region, and the armpits, the rubbing ought to be more prolonged than elsewhere, as these are parts especially infested by the acari; and it is of the greatest importance that all the epithelial scales to which their own are attached should be removed—if any of them are left behind the disease will be almost sure to reappear in a short time. The patient should then be placed in a warm alkaline bath containing about a drachm of carbonate of soda to a gallon of water, and be allowed to remain therein for about a quarter of an hour. He should then be well rubbed all over, more particularly on the parts above specified, with any of the ointments or liniments that may be selected for the purpose of killing the parasites. For this purpose it is necessary that the friction should be rather rough, in order that the cuniculi may be ruptured and the parasites thereby exposed to the influence of the remedies. If the ointment is in itself of an irritant nature it should be carefully washed off after it has been in contact with the skin for some little time; but if this is not the case, it should be allowed to remain until the next application, but the remains of the former dressing should always be carefully washed off before any more ointment or liniment is applied.

The secondary eruptions and the itching which frequently remain long after the disease has disappeared are best treated by the administration of tonics and salines, by the use of warm alkaline or mucilaginous baths, and the application of sedative and astringent lotions or ointments, such as those of lead or zinc. The ointment of the carbonate of lead, and the lotion containing diacetate of lead and glycerine, will be found excellent applications under such circumstances.

If the child when first seen is suffering from pustular, lichenous, or other secondary eruptions, we should on no account commence the treatment above-described until these symptoms are considerably relieved by the treatment last-mentioned.—(ED.)

SEVENTH CLASS.—CUTANEOUS HÆMORRHAGIC DISEASES.

Under the name of *purpura* two lesions are comprised, which, although similar in their natures, are not less the expression of two morbid states, so to say, opposed to each other. But, as is frequently the case, two diametrically opposite causes may produce an apparently identical effect. Thus, under the influence of a plethoric state, the hæmorrhagic molimen may give rise to purpura. So, also, may purpura be produced when the blood loses its normal fluidity, and the economy is exhausted by previous disease, by excessive evacuations, want, &c.

The latter form of the disease, which is much more frequent in infancy, ought to be included in the group of cachectic diseases. But the anatomo-pathological character, so evident and decisive, compels us to accept this class of cutaneous hæmorrhagic affections, although it may be in some degree in contradiction to the classification we have adopted.

SECTION I.—PURPURA.

Purpura is a symptom constituted by red spots, often of considerable size, at other times very small, caused by an interstitial cutaneous hæmorrhage. These spots are either distinct or confluent, rarely attended by fever, and never contagious.

On the occurrence of purpura it is especially important

that we should not place too much reliance on cutaneous pathology, by permitting ourselves to be guided by the lesions alone. This affection may be the result of two different and essentially opposite states of the economy. It most frequently presents itself as the constitutional expression of a general impoverishment—a kind of *cutaneous scorbutus*, succeeding a variety of debilitating causes. At other times, as already indicated by Biett and by many after him, it is the consequence of a spontaneous movement of the blood towards the skin—a kind of *hæmorrhagic raptus*, the consequence of plethora.

It is for this reason that we admit two principal forms of purpura—*sthenic* and *asthenic*. The first form is only exceptionally met with in infancy, especially in its first period; but towards puberty, in vigorous subjects of a sanguine temperament, under the influence of more or less energetic exciting causes, red patches make their appearance, which may occupy the whole external surface of the body. These patches are at the commencement of a bright red colour, which persists for many days, after which the colour fades, and assumes successively the well-known tints of ecchymoses.

The appearance, duration, and disappearance of these spots may comprise about fourteen days, without causing any cutaneous sensation in the patients. It frequently happens that purpura manifests itself by a series of evolutions of these spots; whilst some fade, others appear, by which the duration of the eruption is prolonged. This active or sthenic form of purpura is usually accompanied by general symptoms allied to the state of plethora which gave rise to them. Thus fever frequently exists with a full pulse, a red skin, and a sort of general turgescence, critical hæmorrhages, &c.

In asthenic purpura, which is by far the most frequent

in infancy, the phenomena are diametrically opposite, though they have a certain superficial resemblance.

The spots are here more numerous and larger, and often converted into remarkable ecchymotic patches, appearing at first upon the inferior extremities and successively upon the whole cutaneous surface; even the mucous membranes may be covered with them, and are the seat, as also are the viscera, of serious hæmorrhages. These spots, the colour of which varies according to the time which has elapsed since they first made their appearance, give to the body of the patient a mottled aspect. They chiefly appear upon the regions where the skin is fine and delicate, and upon these parts the slightest pressure is sufficient to produce an ecchymotic patch. WILLAN, BATEMAN, and BIETT have cited cases in which the epidermis, at a level with the spots of hæmorrhagic or asthenic purpura, was raised in the form of ampullæ or bullæ, containing a certain quantity of liquid blood. Such exceptional cases resemble what frequently occurs in the mucous membranes, which in this affection permit the transudation of the blood, giving rise to more or less considerable hæmorrhages from the nose, mouth, vagina, rectum, &c. The general phenomena are likewise in this species of hæmorrhagic purpura dependent upon the general condition, of which it is but one of the symptoms; hence the lassitude felt in the limbs, the indisposition and vague pains, the extreme dejection and repugnance to active exercise which have been observed by all authors. Hæmorrhagic, or rather asthenic, purpura is one of the essential symptoms of scorbutus; not merely of acute scurvy, which has been of more frequent occurrence for some years past than is generally believed, but also of scorbutic cachexia, which is so frequent in infancy, as we may easily assure ourselves by visiting the hospitals for children.

It shows itself also during long and painful convalescences,

when the constitution begins to fail. Sometimes it complicates certain serious acute diseases when they appear in weak children, debilitated by want and a bad diet. It is frequent among the young manufacturing population, whilst, on the contrary, it is now very rarely seen among young prisoners, since, following the example of the reformatory at Mettray, they have been occupied in salutary agricultural occupations.

The diagnosis of these two essentially different forms of purpura, which only resemble each other by an identity of lesion, notwithstanding their important clinical and nosological differences, can never present any difficulty. Authors have justly pointed out the distinctive mark. It is that the maculæ of purpura preserve their colour under pressure of the finger. We should bear in mind that these spots have often been mistaken for flea or bug-bites, which are so frequent in certain climates among the poorer classes.

But with some degree of attention it is easy to distinguish precisely the place where the parasites have bitten.

The appearance of the patients always renders the diagnosis easy. In the sthenic form the nature of the purpura is rendered evident by the colour and vigour of the individuals subjected to violent exercise or any other energetic stimulant. In the asthenic or the hæmorrhagic form of authors, the scorbutic aspect of the patients, who are usually pale, without energy, somewhat puffy, and exhausted by diarrhœa, renders doubt impossible. The hands and the face of the adult are rarely covered with these ecchymotic maculæ; but in the child they are as frequently met with upon these as upon other regions of the body.

We have observed asthenic purpura at all ages of life: in children at the breast we have met with distinct ecchymotic spots coexisting with phagedenic gangrene, but we have much more frequently met with such cases in the second

period of infancy. In children at the breast the spots resembled some *naevi*. Continuous observation for some days will invariably show the nature of these hæmorrhagic maculæ.

The prognosis and the duration of purpura depend much upon the general condition which gives rise to this symptom. It is often serious in the asthenic form, when it is the expression of a deep-seated cachexia, or when hæmorrhages have destroyed the already exhausted strength of the patient. There have been frequent instances of sudden death resulting from this kind of passive hæmorrhage. The active form of purpura is much more rare and less serious in youth; and it is, moreover, very amenable to medical treatment.

Cases of purpura are often met with which do not appear to belong to either of these two forms, and which seem to correspond with those described by authors as *purpura simplex*. They do not in general present the gravity or the marked characters of either form. They occur most frequently in children residing in towns, who are suffering slightly from a too prolonged residence in a vitiated air or from an improper diet. These cases are usually slight, the spots are of a pale red, distinct, of small extent, and not complicated with hæmorrhage. In a word, the symptom is so much the less marked in proportion as the debilitating causes have acted with less energy. These cases ought not to induce us to reject the fundamental division, because they are only manifestations of a slightly impoverished constitutional condition. Finally, it has happened that experienced physicians have mistaken the scorbutic patches of asthenic purpura for ecchymoses resulting from external violence. It is sufficient to bear in mind their possible resemblance to sugillations, contusions, and bruises to avoid such errors.

TREATMENT OF PURPURA.

The treatment varies according to the cause, or rather according to the sthenic or asthenic form of the disease.

In the first form, if the febrile symptoms are severe, if the hæmorrhage has not been abundant, if the pulse is full and vibrating, with all the signs attending plethora, bleeding ought to be practised. This should be accompanied by a spare diet and the use of acidulated drinks. But we know how rare this form is in infants.

The asthenic form is, on the contrary, very common; it may succeed to any disease or to any cause by which the health has been injured. If the digestive powers admit of it, the diet should be full and generous. Hæmorrhages must be stopped by appropriate means. Thus, against ecchymoses and petechiæ we must prescribe stimulating alcoholic lotions, or lotions containing chloride of lime, Goulard water, &c. Against epistaxis, cold lotions on the head, or astringent lotions, pediluvia, and plugging must be employed. All these remedies are assisted by the internal use of bark. M. BRETONNEAU has great confidence in the efficacy of powdered yellow bark, administered daily, in the epistaxis which is so frequent in the second period of infancy, and which is often the cause of a permanent pallor.

Iron, anti-scorbutic syrup, bitters, &c., are also remedies frequently employed in this form of purpura.

EIGHTH CLASS.—CACHECTIC CUTANEOUS DISEASES.

The word *cachexia* has, like many other medical terms, often changed its signification, according to the systems and theories adopted by various authors. At present we understand by it, a constitution impoverished and depraved in consequence of organic or functional derangements.

Cachexias may, in fact, be the result of a great variety of causes.

They form the termination of a number of chronic affections, and present a great resemblance, whatever may have been the cause of their production. They may, without forcing the analogy, be in this respect compared to pains which so much resemble each other, notwithstanding the diversity of the pathological facts which may produce them.

It is well known that, in aged individuals, and even in adults, cachexias influence the physiognomy of certain cutaneous affections peculiar to them. They, also, occasion a considerable variety of skin diseases. Many authors have made the more or less morbid and cachectic state play an important part in the aptitude for contracting *parasitical* affections. We have here classed under the name of cachectic diseases several cutaneous affections, the lesions of which are certainly very dissimilar; but nobody will, we think, deny their clinical relationship.

In the second, and especially in the first, period of infancy,

cachexias are quite as frequent as at the other ages of life, and in our own opinion they are even more frequent.

Among the numerous causes tending to act energetically on new-born children there are some not sufficiently insisted upon; we allude to overcrowding and diet. Overcrowding is, in fact, the most fertile source of infant mortality. It creates with surprising rapidity the most deleterious and powerful miasmata. What occurs among adults in camps is but the diminutive of what occurs among children. At this period of life, in truth, the aptitude to contract the germs of disease is at its maximum intensity. All contagions exercise a powerful influence on infantile organisations.

To resist miasmatic influences, whether contagious or not, an amount of functional equilibrium and stability is required, which is never possessed by the child, where the vital resistance, as we have said, seems of little energy. New-born children sink, therefore, rapidly into a remarkable state of debility and atony. The vitality of numbers of them is nearly extinct, though they yet exhibit a certain degree of plumpness, and the countenance would not lead us to expect a termination so sudden. Alimentation is during the first few months more than at any subsequent epoch the most important of all functions. It cannot suffer in its absolute integrity without an immediate injury to the child. On watching the mode of proceeding of many nurses and mothers it is easy to account for the enormous mortality among certain classes of new-born children. It frequently occurs that careful and attentive mothers, notwithstanding their good intentions, endanger the lives of their babes either from the absence or insufficient quantity of their milk or by diseases of the nipples. The latter, as every one knows, are very numerous, and among them there is one little attended to by mothers because they do not experience any pain. We allude to the shortness of the nipple. This organ, which is so important

for suction, is frequently too short, the lips alone are able to seize it, this causes a fatigue which enfeebles the child the more, as notwithstanding its avidity it is but insufficiently nourished. Cracked nipples, which, on the other hand, cause much pain to the nurse in suckling, have the same effect. The want or diminution of alimentation, which are the consequences of it, rapidly reduce the infants to a cachectic state.

One of the chief clinical phenomena of this group is the frequent concurrence, in the same subject, of many of the affections which compose it; and, moreover, all these cutaneous lesions have a tendency to phagedenic gangrene, which is in some sort the final expression of cachectic cutaneous affections in the infant.

Though it be true that the cachexias of new-born infants do not present exactly the same aspect as in a more advanced age, it is not the less true that cutaneous affections appearing under the influence of cachexia are as common among the new-born as during the second period of infancy. The dissimilarities depend upon the age. A new-born infant may be cachectic without the external appearance being so much altered as in an older child.—(See *Diagnosis of Syphilis*.)

SECTION I.—CACHECTIC PEMPHIGUS.

Pemphigus is a bullous affection of the cutaneous system, characterised by rosy patches, followed by the formation of bullæ containing pus or serous fluid.

It was formerly approximated to syphilis, but this theory having been generally rejected, this cutaneous disease fell in some degree into oblivion.

But in 1851 Professor P. DUBOIS, in a very remarkable discourse before the Academy of Medicine, based upon the researches of Dr. DANYAU, endeavoured to demonstrate the syphilitic nature of pemphigus in new-born children. This opinion was vehemently attacked by some of the speakers;

and in studying the question in the special treatises, we are struck by the discordance exhibited by various authors. The differences are great: some insist upon its invariable mild character, others, on the contrary, upon its gravity in almost all cases. The explanation to these differences is, in our opinion, to be found in the fact that two varieties of pemphigus exist, the one simply inflammatory, the other cachectic; the former is constantly mild, whilst the cachectic variety, always an ultimate phenomenon, borrows from the cachexia, of which it is one of the expressions, its constant gravity. The latter form which alone concerns us here is characterised by bullæ, occupying by preference the plantar and palmar surfaces of the feet and hands. On watching the commencement of the affection, we observe that the bullæ are generally preceded by rosy spots, becoming gradually darker and finally of a violet colour, while a slight induration is perceived at their base. They are sometimes surrounded by a violet-coloured circle, which is not seen surrounding bullæ on the trunk.

Generally speaking, the bullæ of cachectic pemphigus attain their greatest dimensions less rapidly than those of simple infantile pemphigus. They differ also in volume, and the serum they contain. In the species termed simple they may attain the size of a walnut or a small egg; those of cachectic pemphigus do not usually exceed the dimensions of a pea or of a small nut; they are mostly flattened and irregularly rounded. In the cachectic form the serum is neither so limpid, nor has it that opaline transparency seen in the other form; the secretion is, on the contrary, first yellowish and puriform, then turbid and sanguinolent; sometimes the liquid consists of a certain quantity of altered blood, emitting a fetid odour. The duration of pemphigus greatly depends upon the degree of vitality of the little patient, and on the mode of evolution of the disease. If

all the bullæ are simultaneously developed upon the different parts of the body, the total duration of the exanthem will be equal to that of one of the bullæ taken by itself. But if the eruption be successive, and the vesicles arise one after another, the duration of the affection depends upon the more or less energetic resistance of the child.

The mean duration of cachectic pemphigus, from its first development as regards the periods of rubefaction, tumefaction, and vesication, is from six to twelve hours. The progress and stationary condition of the bullæ lasts from two to four days, and finally, the period of their rupture and sinking occupies from twenty-four to thirty-six hours. All these phases are not often observed, for the affection frequently commences in utero. The bullæ may be developed upon the fœtus while yet surrounded by the amniotic liquor, and the disease may show itself at birth in the form of the characteristic ulcers which succeed them. "The commencement of syphilitic pemphigus," says DUBOIS, "generally precedes birth, sometimes for so long a period that in the majority of cases we can observe, as soon as the child is born, some bullæ empty and broken, beside others which are fast beginning to appear, or have arrived at their perfect state."

The constantly fatal prognosis of this formidable symptom, or, more correctly, of the serious constitutional condition in which it appears, does not permit us to watch all the phases of its pathological evolutions. It most frequently happens, as just stated, that the disease commences before birth, and that death abruptly closes the last periods. The specific nature of this variety of infantile pemphigus is confirmed by a variety of coincident circumstances; for it must be admitted that it has no pathognomonic mark to distinguish it from non-syphilitic pemphigus. These circumstances are, first, the gravity of the general condition, the

early period of its appearance, sometimes the evident existence of syphilis in the parents, and, finally, the fact remarked by M. DUBOIS, its development in new-born children having the decrepit aspect, which was formerly considered as one of the best characters of congenital syphilis. The diagnosis of this affection cannot often present any difficulties, unless the bullæ are numerous and in close approximation, when after their rupture irregular serpiginous ulcers may arise; and, as a general cachectic condition always exists, phagedenic and gangrenous ulcers soon make their appearance, so that unless death rapidly supervenes we may observe all the phases of local disease peculiar to the ulcerous affections of infantile cachexia. This termination is by no means peculiar to pemphigus; it may be observed in all cases of serious infantile cachexia. During the development of this disease, more or less grave general symptoms appear. The first of these is generally diarrhoea; the stools are glairy and sanguinolent, then vomiting and meteorism supervene, and are followed or preceded by violent paroxysms of suffocation. Atrophy rapidly supervenes, and at the time of death there frequently exist, as we have said, phagedenic and gangrenous ulcers on the ankles and on the genital organs, but especially in the buccal cavity, the pharynx, and the nasal fossæ.

The opinions of syphilographers are, as stated, not in accord in regard to the syphilitic nature of pemphigus; there are two camps as yet divided. Some assert a syphilitic origin, which is rejected by others, because the eruption does not present the characters common to other symptoms of syphilis, such as the coppery colour and the circular form of the bullæ. It may, perhaps, be possible to reconcile these two exclusive opinions by bearing in mind that pemphigus of new-born children is an affection characterising a depraved general condition; or, in other terms, this pemphigus is one

of those cutaneous affections which form a group, with very distinct characters to which we have applied the term cachectic.

Hence the special characters which distinguish it from simple infantile pemphigus (See *Inflammatory Diseases*), such as the gravity of its prognosis, its tendency to ulcerate, its incomplete development. The question, in respect to the time of appearance, may be explained by this view of its nature. For among the cachexias which the new-born child may bring into the world, the syphilitic is certainly the most common. Is not the decrepit aspect as well as pemphigus given as the pathognomonic character of syphilis? And yet there is nothing special in this decrepitude, but it is equally a cachectic expression.

Now in the new-born, syphilis is the disease which most frequently causes a cachectic state, which has originated at an early period of intra-uterine life. Hence the epithet syphilitic applied to the pemphigus of new-born infants and to the decrepitude pointed out by DOUBLET.

In our opinion, pemphigus, though allied to syphilis as the producing cause of the cachectic condition presiding over the development of this exanthem, is not a decided expression of syphilis. There may exist a strong presumption of congenital infection, but without other indications it appears to us prudent to verify it by an inquiry into the state of health of the parents before we can arrive at any certainty. These conclusions are not entirely our own, but are supported by men considered as authorities on the subject.

SECTION II.—RUPIA.

By the name of *rupia* is understood a cutaneous affection characterised by small, distinct bullæ, filled at first by a serous, and afterwards with a turbid, purulent, or sanguinolent fluid. The aspect of these bullæ is far from being always

the same; these differences are intimately allied to the degree of alteration in the condition of the patient. This cutaneous affection, constantly chronic, is the sign of an impoverished constitution; hence it is never met with in sound and vigorous children; it is truly the expression of a more or less advanced state of cachexia. The obstinate ulcers so frequently succeeding the bullæ of rupia are a proof of it. Authors have described three varieties, representing the three degrees of intensity, which characterise the differences of the disease according to the general condition of the patient. These three varieties are, *Rupia simplex*, *Rupia prominens*, and *Rupia escharotica*.

Rupia simplex commonly appears on the legs, more rarely on the trunk and the other parts of the body. It commences by the appearance of one or several flattened bullæ, about a centimeter in diameter, containing a liquid serum, which soon becomes turbid and purulent, and is transformed into scabs of a brownish colour, which have a peculiar form. Their summit is raised in the form of a cone, while the circumference at the base is continuous with the epidermis which is raised by the suppuration underneath. Beneath the crust, which is soon detached, a superficial ulcer exists, which commonly heals up soon, when compared to the ulcers of the following species of rupia. The cicatrices and the ulcers are of a deep red colour, which is remarkable for its intensity and the slowness with which it disappears.

Rupia prominens presents larger bullæ, large scabs, and deep ulcers. A circular red spot signalises the advent of one of these bullæ. Then the epidermis is slowly raised by a brownish fluid, more or less thick, and it soon forms a scab, the size and thickness of which increases for some days. In this variety we meet with what is not observed in the preceding form, namely, a red border, some lines in breadth, surrounding the crust. The epidermis of this red areola is

raised in its turn by serum, which thus becomes the origin of a crust which is added to the first; so that within one or two weeks the primary crusts may attain dimensions which have led to their being compared to oyster shells. While they thus enlarge they increase in height and assume a conical form.

On detaching these incrustations, which are commonly very adherent, we find beneath them an ulcer of considerable size and depth. Similar crusts are reproduced, according to the more or less advanced state of the cachexia of the patient; or an ulcerative process may be established, producing what are termed *atonic ulcers*, the cicatrization of which is difficult and tedious to obtain. The cicatrices possess a peculiar fragility which causes them to break, and they then present a violet tint which persists for a considerable time.

This variety of rupia is rare in the child—indeed the rarest of the three; but it is, on the contrary, frequent in the cachexia of the aged; while the following variety may be said to be peculiar to infancy.

Rupia escharotica is generally what may be termed an ultimate cutaneous affection.

The remarkable scabs of the two preceding varieties are not produced in this. Upon the scrotum, the legs, and thighs of cachectic children in the first period of infancy, rarely upon the upper extremity, are seen red, livid spots over which the cuticle is raised by a small quantity of sero-sanguinolent fluid. These bullæ increase in an irregular manner, and assume a blackish hue.

The epidermic pellicle once broken leaves the dermis exposed, which ulcerates, and unless death rapidly supervenes the ulcers soon present all the phases of the phagedenic gangrene of children.

This variety of rupia is often associated with other cutaneous

manifestations, such as a cachectic ecthyma, or complicated with phagedenic gangrene, and sometimes with purpura hæmorrhagica.

Rupia is in general, as we have said, the consequence of a cachectic state. In the infant, cachexia appears much more rapidly than in the adult and the aged. All authors have observed that the affection supervenes in the course of convalescence from serious fevers, rubeola, variola, &c.; but it also appears after any debilitating cause, whatever it may be, especially from overcrowding, want, and misery.

The diagnosis of rupia is never difficult; it is sufficiently characterised by the aspect of the bullæ, followed by scabs with a rugous surface, formed by a succession of concentric zones, which correspond to every increase of the crust. Some authors have called the bullæ of *rupia escharotica* gangrenous pemphigus. It is, in truth, easily perceived that these two affections resemble each other closely in their conditions. Cachectic pemphigus has the same clinical value, the same aspect, and the same lesion as *rupia escharotica*.

It is not altogether the same as regards cachectic ecthyma, which, although having the same prognostic signification, does not present the same resemblance. Ecthyma is clearly a pustular eruption, and its scabs are firmly embedded in the skin. The ulcers succeeding ecthyma have not the same aspect: the margins are perpendicular and perfectly round, and they are mostly agglomerated in large numbers near each other.

The seriousness of the prognosis in rupia depends upon the morbid condition in which it appears. When the disease appears in puny, sickly children, it is protracted and obstinate, and the ulcers which it leaves are slow to cicatrize completely.

When it supervenes in cachectic children, it is most frequently a fatal addition to the other symptoms. The age of

the patients is an important consideration; in proportion as the subject approaches puberty, rupia is less serious, but the younger the child is the greater is the danger.

SECTION III.—CACHECTIC ECTHYMA.

Cachectic ecthyma in children comprises what authors have described under the name of *ecthyma infantile*, *ecthyma luridum*, *ecthyma chronicum*, and *ecthyma cachecticum*.

Ecthyma is an affection characterised by large and prominent pustules with a red, circular, and elevated base. WILLAN appears to have considered these pustules as the type of what he termed *phlyzacious* pustules.

Cachectic ecthyma generally appears on the trunk, commencing with small papulæ of a dark red colour, which in a few days are converted into pustules of greater or less size, filled with sanguinolent serum. The cuticle is ruptured and allows the serum to escape, and after a short time it is replaced by a thick, projecting scab firmly adhering to the dermis, from which it only becomes detached after the lapse of some weeks.

When the crusts are removed before they fall off spontaneously, or when the general condition of the patient becomes more and more impoverished, the crusts are replaced by sanious ulcers with a greyish base, exhibiting no tendency to heal up. When, on the contrary, the crust has remained for a long time, and the general health improves, the falling of the scabs exposes violet cicatrices, which preserve their tint for a long period.

These two aspects of cachectic ecthyma constitute, so to say, two forms of this affection. The differences are essentially under the dependence of the general health, as may be observed in children remaining for a considerable period in the public hospitals for the treatment of chronic diseases, which sooner or later carries them off. Thus it is chiefly in

children who have been prematurely weaned and badly fed, or deprived of hygienic care, that we observe the development of cachectic ecthyma complicated with phagedenic ulcerations.

Pustules appear in these children upon the back or abdomen, which are very rapidly filled with pus; they burst, and are replaced by a peculiarly formed ulcer. They are commonly perfectly circular, with perpendicular margins, and so regular that they resemble the holes made in leather by a punch. These ulcers present a greyish base, bleeding on the slightest touch; their circumference is by no means swollen, and presents scarcely a trace of redness. Most frequently they are agglomerated; as many as thirty of them may be counted upon a surface not larger than the back or abdomen. At the margins of this agglomeration there are commonly seen a few small pustules of ecthyma terminating their evolution by being rapidly converted into ulcers. Several ulcers frequently unite, forming an irregular circular ulcer, in which we may easily recognise the number and the round form of the ulcers which, by their union, have combined to produce it. The large dimensions of this ulcer enable us better to examine the base of it, and to measure the depth of the ulcerous process. The dermis is usually destroyed in its whole thickness, leaving upon the bottom of the ulcer a greyish detritus, exactly resembling that which characterises phagedenic gangrene. As in the latter, so in this disease, suppuration is all but absent, and there is the same facility for the flow of blood which escapes in small quantities when the dressing, which has become adherent in drying, is being detached. This collection of true ulcers, each of which is about a centimeter in diameter, resemble, by their approximation, the appearance produced by the discharge of a gun, loaded with large shot, fired at a short distance upon a dead body, the elasticity of which has disappeared, and on which,

consequently, each perforation is as large as the projectile causing it. The approximation of all these ulcers, which are usually grouped upon a small surface of the body, is one of the chief characteristics of the aspect of cachectic ecthyma. The development of this affection is always allied to a depraved general condition. It only supervenes in this striking form during the first and second periods of infancy in children impoverished by previous disease or privation. It is quite sufficient to have seen one case, never to confound it with any other disease. This latter form, which is called ulcerous, is chiefly observed as a terminal phase of the affection. The prognosis of ecthyma is, consequently, always serious, for the simple reason that it is always allied to a more or less debilitated condition. We must not omit stating that, in emaciated, discoloured children, suffering from diarrhoea, it is frequently taken for a symptom of syphilis, on account of its circular ulcers, the circumference of which is sometimes of a violet hue, and especially on account of the general condition of which it is but the symptom.

SECTION IV.—PHAGEDENIC GANGRENE.

Early youth is subject to the development of spontaneous ulcers, with very well-defined and marked characters. These morbid manifestations may assume several characteristic forms.

One of these forms is gangrene of the mouth, which, by its progress and appearance, has necessarily excited the attention of observers. It may seem strange to find gangrene of the mouth in conjunction with cutaneous affections. We have, in conjunction with our learned teacher, Dr. BOULEY, endeavoured, in 1852*, to show that *phagedenic gangrenes*, of which the black gangrene of the mouth is only a manifestation in its most intense form, are, in reality,

* *Gazette Médicale de Paris.*

but the local symptoms of a cachectic condition, of which we have pointed out the chief characters and also its frequent *scorbutic* origin. We can easily understand that gangrene of the mouth should have attracted the attention of observers; but it is impossible to separate it from phagedenic gangrenes, since, like the latter, it is produced by the same pathogenic causes and has the same lesions, the only difference being in its more or less acute and rapid progress. We have, therefore, in the work cited, divided these affections as follows:

- 1.—Into phagedenic ulcerations of asthenic aspect and progress.

- 2.—Into ulcerations of super-acute progress, rapidly becoming gangrenous (gangrene of the mouth).

- 3.—Yellow eschars, which may be termed terminal.

Having no intention of giving here a description of gangrene of the mouth, we shall confine ourselves to pointing out its identity with phagedenic gangrene, restricting our observations to that form called asthenic phagedenic gangrene, which manifests itself by preference on the skin.

From the period of birth until the tenth or twelfth year, under the influence of bad hygienic conditions—such as want, overcrowding, and especially that peculiar state of the economy which succeeds eruptive fevers—true ulcers supervene on certain parts of the cutaneous and mucous surfaces, and always present an identical appearance and progress.

These ulcers are at times essentially phagedenic, and remain so until the death of the patient, or until they are modified by an energetic treatment. At other times they pass immediately after their appearance into the black and solid gangrene, the type of which is the gangrene of the mouth so often described; or, again, under the influence of the same general condition, more or less considerable parts of the mucous tissue may suddenly become mortified without any

previous appreciable disorder. These eschars offer this peculiarity: that they are never dry, black, and solid, like those seen in gangrene of the mouth properly so called: they present, on the contrary, quite a different aspect, and it is only accidentally that they are eliminated by softening, because death commonly supervenes before they undergo any further alteration. These are the three varieties of phagedenic gangrene we have enumerated.

The species directly allied to our subject, and which alone interests us, namely phagedenic gangrene with an asthenic progress, is developed on the margin of the gums, in the culs-de-sac of the gingivo-buccal folds, or upon any part of the cutaneous surface where the skin has some analogy with the mucous membrane, or, as HUNTER said, upon denuded and exposed surfaces.

It offers differences in aspect, according as it is seated in the mouth or upon the cutaneous surface. In the latter situation we must study it particularly.

Upon the skin it may be observed to commence in various modes. Thus, sometimes the starting point of one of these ulcers is a small pustule, like that of ecthyma, which, bursting, rapidly gives rise to an ulcer: at other times, there is, at first, a small ulcer, scarcely visible, but nevertheless having a characteristic aspect, without it having been possible to detect any earlier symptom. It then appears as if the orifice of a cutaneous follicle had been spontaneously the seat of the ulceration; but, once produced, whatever may have been their mode of appearing, they follow an identical course; their chief features consisting in being *serpiginous*, conjoined to a fundamental character which they possess in the highest degree, namely, *phagedenism*.

Their usual colour is a greyish white, or sanious tint; most frequently in the centre of their flat and uniform surface there exists a moist, fibrinous detritus; at other times these

surfaces are granular and regular, with a tendency to dry up, as if they were the result of recent burns. When they have acquired large dimensions and have penetrated deeply into the thickness of the dermis, these surfaces, although sanious and humid, are very regularly reticulated, as if they reproduced the subcutaneous cellular alveoli.

When the progress of the serpiginous encroachment of these ulcers is a little retarded, their borders become perpendicular; they present curves, but in circumscribing oval and circular spaces, the curves themselves are constituted by a series of small, eminently irregular, broken lines. The colour of the margin is usually red, or at any rate of a more lively colour than the centres of the ulcers. When the latter are in course of enlargement the borders are cut obliquely from without inwards, and have then a colour different from the rest of the diseased surface, forming a sort of selva around the ulcer. This encroaching border is not only known by its colour, but also by its grained aspect, and likewise by its being completely deprived of any humid and sanious detritus.

In proportion as the surface enlarges by the incessant progress of these borders, the latter—which until now could be clearly distinguished from the rest of the ulcer—are soon confounded with it by assuming all the characters of its centre; or, in other words, whatever may be the intensity of its encroaching progress, the ulcer has always borders, the breadth of which is fixed whatever may be the size of its surface. It seems that the different aspect of this kind of circumference is owing to the circumstance that the organic substance has not yet been reduced to a sanious detritus; and in proportion as this undulating margin advances towards the sound parts, it leaves behind the dirty aspect peculiar to phagedenic ulcers.

These ulcers have still another mode of enlargement.

Thus: not only do they increase by the progression of their borders in every direction, but there is another almost constant fact which singularly hastens the rapid development of their surfaces. All around the principal ulcer pustules, or ulcerous points arise, as we have already said in speaking of the mode of origin of the disease, which increase rapidly in extent and unite with the primary ulcer. From this successive union of small ulcers large serpiginous surfaces result, which commonly have a round form with very sinuous or scalloped borders. The encroaching and serpiginous progress of these ulcers may be correctly compared to the mode of progress of phagedenic venereal chancres.

These ulcers, in fact, like chancre, gradually encroach upon the sound tissues, and may rapidly cover a large cutaneous surface. They also spread, like chancres, in breadth and length, without penetrating deeply into the tissues. It may be observed that, generally, these infantile ulcers barely extend beyond the thickness of the dermis; and it is rare to find any considerable portions of the muscular and osseous system affected. There exists, as regards these ulcers, a well-marked symptom by which we may recognise the danger of their encroachment upon the sound parts which are not yet involved. This is a diffuse œdema, which appears to be seated in the subcutaneous cellular tissue, and forms a true œdematous border, the precursor of approaching alteration. The aspect of these lesions is constantly the same. It may, however, offer some slight shades of difference, according to the more or less humid and sanious state of the surfaces, and according to the age of the patients. Thus the older the child is, the more acute, in general, is the progress of the phagedenic gangrene, and the more rapid is the advent of the various phenomena. The ulcers are then, also, more sanious and humid. In new-born children, on the

contrary, these kinds of gangrene sometimes assume a form which always misleads; we may say they are then invariably referred to syphilis. The development of this variety of phagedenic gangrene is not, in fact, effected in the same manner, being neither the result of a pustule nor of an ulcerated spot, as in the preceding forms. To very slight and extremely superficial erosions succeed bright red spots. These spots are also often converted into an erythema, or uniform redness of the whole trunk or of the inferior extremities. In the spots where the colour is brightest, these small erosions appear in small numbers at first; then according to the general health of the infant, according to the care devoted to it, and the hygienic conditions to which it is exposed, they multiply, enlarge, and unite together, forming the most irregular figures. Most frequently, these small erosions, which are *essentially* superficial, have undulating borders, which at other times resemble regular striæ. On examining them closely they are seen to be finely granulated, without roughness, perfectly even, and so superficial that the elevation of the borders cannot readily be perceived. They are usually numerous, and so close together that the few points which are not yet attacked form isolated spots in the midst of the diseased parts, and at first sight these healthy portions of skin may be mistaken for the affected parts.

These superficial surfaces often acquire large dimensions. We have frequently seen infants in which they literally covered the whole inferior half of the body. It is especially in such cases when some gourmous cutaneous affection of the head or face exists at the same time that new-born children are by most physicians looked upon as tainted with syphilis. It is from our observations of these alterations in *special hygienic* conditions that we have doubts as to the syphilitic nature of these frequently fatal lesions. We have

always in such cases endeavoured to discover the existence of any syphilitic phenomena in the parents. Our inquiries have only yielded negative results. Moreover, it is evident that the erosions of cachectic new-born infants are, in reality, only the phagedenic gangrene we have described, as we may easily assure ourselves by observing that they assume, at a certain time, the aspect, progress, and gravity of asthenic phagedenic gangrene, as seen in older children. Here, then, we find an identity of nature, of cause, and of lesion. A final reason which induces us to approximate these erosions of the new-born to the phagedenic gangrenes of a more advanced age, is that even in the former it rather frequently happens that we meet with them upon the whole inferior part of the body, and then the lesion attacking the mucous membrane of the vulva or the cutaneous folds of the thighs and the scrotum cannot be distinguished in any manner from what we have described under the name of asthenic phagedenic gangrene. They are so much alike that the idea of separating them has never occurred to us. Every person who approaches these facts without any preconceived theory will find in them the same disease, the principal external phenomena of which depend upon the general condition of the patient. We would, however, observe that very often these erosions show themselves in new-born infants having a healthy appearance, who have suffered but little, and are possessed of a more or less energetic vital resistance; in which cases medical treatment may effect a perfect cure. What has contributed not a little to the assumption of a syphilitic origin of these alterations of the superficial portion of the dermis, is that one of the best remedies for their cure is the bichloride of mercury in baths or in lotions—a curative action which this agent possesses in a great number of cutaneous affections.

All the phagedenic gangrenes, upon whatever spot they

may appear, have a characteristic appearance, so that they cannot be mistaken, notwithstanding the slight differences they exhibit in regard to the degree of intensity of the ulcerative process. All these surfaces permit the escape of minute drops of blood at the slightest touch, which coagulate upon the spots, and mixing with the detritus may produce a blackish tint, which, at first sight, makes us suspect the existence of black, gangrenous eschars. A knowledge of this fact enables us to avoid an error of this kind.

At no period of their existence can any pellicular membrane be perceived upon these ulcers. We insist upon this point as a reply beforehand to persons who might suppose that we intend to describe cases of cutaneous diphtheritis.

Upon no point of their extent can we meet with anything that can be at all compared to the membraniform concretion which characterises a diphtheritic affection. On seizing with the forceps the humid and yellow débris of the ulcerous surfaces, nothing is obtained but a gangrenous semi-liquid substance, consisting of the detritus of the various elements of the dermis mixed with pus-globules. There is incontestable evidence that these ulcers are the result of a molecular gangrenous process, slow in progress without any heteromorphous production. When these asthenic gangrenes progress very slowly, producing ulcers having a characteristic aspect, we sometimes see around a large ulcer, which has penetrated beyond the thickness of the dermis, many small ulcers, involving but a quarter or half the thickness of the skin. Most frequently these ulcerous spots, commonly of an elliptical form, have a more or less brown colour, which somewhat resembles that of burns of the third degree. If there were no concurrent phagedenic ulcers we might hesitate for a moment as to the nature of these lesions, as they do not present the character of humidity and sanious softening which is so marked in the principal ulcers.

It likewise, at times, occurs that in moribund infants similar ulcerous spots supervene shortly before death, which have not, so to speak, sufficient time to assume their characteristic aspect before the death of the patient. These kinds of cutaneous ulcers are exactly the same as those seen sometimes under the same conditions in *post mortem* examinations, seated in the buccal mucous membrane, without our ever having suspected their existence in that part during the life of the patient.

The parts selected by phagedenic gangrene are especially, as we have said, those where the skin has some analogy with the mucous tissue—such, for example, as the genito-crural folds, the perinæum, the circumference of the anus, and the internal part of the buttocks. In this locality we almost always find two ulcers, which are exactly applied to each other when the buttocks are approximated. This nearly constant fact, in conjunction with the numerous examples of the spontaneous development of phagedenic ulcers upon sound parts which are in juxta-position with ulcerated surfaces, must inevitably induce us to suspect a possible local contagion. Inoculations practised with the sanies of these ulcers upon the sound parts of patients affected by them have produced no effect, though they have been carefully performed twenty times in succession. Though the gangrenes appear to show themselves more frequently in the parts we have enumerated, we must, nevertheless, admit that any part of the cutaneous surface is liable to them: thus the back and legs, in new-born infants the buttocks and ankles, either in consequence of bruises or from some unknown cause, are often invaded by ulcerous spots in the course of chronic diseases. Lastly, we have sometimes observed the pustules of rupia, or of cachectic ecthyma, and the sores from blisters, serve as the starting points of large spreading phagedenic ulcers, which soon carried off the already exhausted patient.

The duration of this phagedenic gangrene is considerable, if we consider the general condition in which it is usually met with, and especially if we compare it with the very acute progress of the black gangrene, termed gangrene of the mouth. In fact, in the latter the diseased surfaces are immediately converted into large eschars, while in asthenic phagedenic gangrene the progress is slow, and the eschars, which are never met with, are here replaced by a sanious and molecular detritus.

Such are the principal characteristics of the aspect, progress, and intimate nature of this phagedenic gangrene when it attacks the skin. But when it exists in the mouth considerable difficulties as to the reception of our views arise on account of the variety of affections described as peculiar to that cavity, all of which, at some periods of their existence, may assume a similar aspect, more apparent than real, but which has not a little contributed to render the study and nosological classification of these affections complex and difficult. If in pathology it be legitimate to assume the identity of various morbid lesions when it is affirmed that they habitually exist at the same time in the same patient, that they almost always show themselves together in certain given conditions, and when, moreover, they present the same aspect, the same progress, the same gravity, and we may add the same modification by the same therapeutic means, we may here observe beforehand, that the alterations of the buccal mucous tissue are also identical with ulcers situated in the larynx, of which we shall speak in the sequel.

Asthenic phagedenic gangrene of the mouth may commence in various ways. Thus it may commence in the form of a greyish ulcer, occupying the undulating border of the gums. These are slowly destroyed by the progress of the ulceration, which tends to spread at first to the parts adhering to the neck of the teeth, and subsequently to the

parts adhering to the maxillary bones. The presence of the ulcerated border causes the teeth to be covered by a fetid sanies mixed with tartar; they are soon laid bare and exhibit their alveoli denuded by the progress of molecular gangrene. In this form of the commencement of phagedenic gangrene, large portions of the border of the gums are generally attacked at once; the disease is then prolonged during a considerable period by the frequent alternations of more or less complete cure and the reappearance of ulcers. The general condition becoming worse the ulcers spread, losing nothing of their specific and asthenic character. It also often occurs that they commence on the undulating border of the gums, involving only the corresponding parts of two or three teeth. The alteration commences with a very fine red line situated upon the edge of this portion of the gum. In a few hours this red line may be converted into an ulcerous line which may very rapidly, sometimes within twenty-four or thirty-six hours, destroy the whole gingival tissue, and this to an extent which may not exceed that of a few teeth. This loss of substance is effected, molecule by molecule, without any other trace remaining than a kind of dirty and sanious detritus seen upon the ulcerous margin. Generally when these ulcerations progress thus rapidly, after having laid bare the teeth, the alveoli, and the corresponding parts of the maxillary bones, they reach the gingivo-jugal cul-de-sacs, and then proceed in two different directions. In one direction they are propagated by continuity upon the mucous membrane and the internal surface of the cheeks, and in another direction they follow the periosteum, which they destroy in the same manner as the gingival tissue. It may also occur, when an ulcer of this kind is developed, as is frequently seen at the level of the canine and the first molar teeth on one side of the upper jaw, that the gingival tissue is destroyed as well

as the bottom of the cul-de-sac, and the ulcer follows on one side the jugal mucous membrane, while on the other it spreads upon the periosteum, covering the external surface of the superior maxillary bone, then the periosteum of the malar bone, and, finally, a portion even of the inferior part of the orbit may be attacked, as we have often witnessed.

In these cases the ulceration destroys the periosteum completely without leaving any trace of it: they also destroy the connecting substance by their formation between the osseous surfaces and the soft parts. The latter are only altered to a small depth, and merely cover the bones without adhering closely to them as they did before the extension of this serpiginous ulcer. Such disorders may exist without manifesting themselves externally in any very evident manner. Sometimes considerable lesions are suddenly recognised by a slight hard and diffuse œdema of the corresponding cheek. While on exploring the buccal cavity one is surprised to find a perforation of but small dimensions apparently confined to a single tissue of the gum.

The osseous surfaces thus deprived of their periosteum are speedily altered; they become at first of a yellowish colour, then if the contact with the ulcer and its sanious débris is prolonged, they become black and very brittle. It is worthy of note that when the bones are affected at the points where vascular or nervous fibres of a certain size enter, the latter alone remain intact, all the rest are reduced to a putrescent matter. It is impossible to find any recognisable traces of normal tissues. These ulcers may remain more or less stationary, or be slower in progress; but the œdema which surrounds them presents a peculiar character. In truth, in these two different manifestations of the same disease this œdema alters the appearance of the disease, and it has not under these two circumstances the same semeiologic and prognostic value.

As in phagedenic *cutaneous* ulcers, we also find in spreading ulcers of the same kind in the mouth, a diffuse peripheric œdema, which is the precursor of the approaching ulceration. But we have seen that in the mouth these ulcers may remain stationary for some time, in which case the œdema is not diffuse, but is exactly limited to the circumference of the ulcers, presenting such a hardness that it can only be compared to the callosities seen around those chronic ulcers which have been termed *callous ulcers*. In this last variety of œdema the tissues, which are the seat of it, are tense and smooth, as in the diffuse and soft œdema, which precedes the ulceration. But there almost always exists in its centre a characteristic red, glossy surface, which is a certain presage of an approaching black, gangrenous eschar, while in the callosities, of which we speak, the external parts are smooth, but always pale and dull. Under the finger they produce the same sensation as the touch of a rigid corpse. All these ulcers, like those which we have described as occurring on the skin, permit the escape of blood with the greatest facility; often under the mere influence of the cries of the children a considerable quantity may escape.

This bloody discharge may, by its mixture with the gangrenous detritus, give to these lesions a repulsive aspect, and a black, gangrenous appearance may result from it, which may induce the belief that the disorder is more advanced than it really is. Let us add that this is a common occurrence in nearly all buccal affections of the kind, and has frequently given rise to errors in diagnosis. There is another phenomenon common to all ulcers of the mouth—this is the fetid odour of the breath. Nevertheless, we must say, that in the case of phagedenic ulcers the odour is sufficiently characteristic to enable us to recognise it with tolerable facility when we are familiar with it: this peculiarity is slight it is true, but it appears to be

peculiar to them. We know that certain affections of the mouth may assume the aspect of these kinds of ulcers; but in such cases the resemblance is but momentary. It is a constant occurrence in aphthous disease that we observe the ulcers in this affection, which might be called a febrile buccal exanthem, and which regularly runs through its phases, assume a repulsive and sanious aspect. The tongue, the cheeks, and the edges of the gums may be the seat of greyish ulcers covered by a bloody detritus, with raised and cedematous borders. This transitory state is, however, not of long duration; the borders soon sink, the aphthæ become of a caseous white, diminish in extent, and cicatrize completely.

It may be added, that the healing process may be considerably promoted in these two cases by the topical application of powerful caustics.

In characterising a nosological species we should be on our guard against being exclusively influenced by secondary or fugacious characters. We should, on the contrary, attach great importance to the general predominating aspect, the progress of the disease, the nature of the lesions, and above all to the relations which may exist to this or that state of the general economy. But if there be any unquestionable and universally admitted fact in the pathology of infancy, it is that gangrene of the mouth, of the vulva, or of any other part, only appears in children under the dependence of a peculiar state of the economy, which is most frequently a cachectic condition.

It is palpably evident, and daily observation at the Hospital for Children abundantly verifies it, that there exists a profound analogy between the preceding cutaneous ulcers and those we have described as having their seat in the mouth. They possess the same spreading tendency, the same duration, and they are all dependent on the same general con-

dition, so much so that we have frequently seen buccal, cutaneous, vulvar, and laryngeal ulcerations existing simultaneously in the same patient. These instances of the concurrent existence of asthenic gangrenous spots on different tissues always appeared in patients who presented that general condition apparently necessary to the production of these lesions.

The description we have just given shows what modifications of aspect and progress age may produce in the phenomena of cutaneous cachectic affections.

It is for this reason that true gangrene of the mouth is so rare in the first period of infancy, although phagedenic gangrene is frequent; but in the new-born infant and during the whole period of lactation, these ulcers are essentially serpiginous, spreading, and superficial, attacking without distinction any part of the cutaneous surface without any preliminary modification, except a more or less marked erythema. We have seen that in early infancy they are less sanious, less phagedenic, and that the humidity is much less marked; whilst in the second period of infancy, and in older children, the phagedenism has a more decided character; the surfaces are humid, covered with a putrid sanies, which is truly gangrenous, and, as we have sometimes seen, black cutaneous eschars are produced resembling gangrene of the mouth.

These morbid alterations are almost exclusively peculiar to infancy. It is rare to find analogous lesions in the cachectic adult. We have recently met with a remarkable instance in the wards of Professor GUILLOT. The subject was a young girl, about twenty years of age, recovering from very severe erysipelas of the scalp. Cauterization with hydro-chloric acid had modified the phagedenic gangrene, and the local treatment had been energetically aided by a tonic and strengthening medication.

Cachexias supervene readily during infancy, and are very fatal; but in addition to the gravity and frequency of infantile cachexia, there certainly exists some special cause for the production of phagedenic gangrenes which are so frequent in the hospitals for children, and wherever they are crowded together. If there is any special cause producing these lesions, it is certainly the peculiar condition into which eruptive fevers, and especially morbilli, plunge these children, as shown by the following summary: Of forty-six cases of phagedenic gangrene during the second period of infancy, we met with but six apparently independent of the morbillous affection; and two of these six had just recovered from variola. This is not the case in the new-born and in the first period of infancy. The cachectic state and the lesions dependent upon it are very easily produced without the concurrence of so energetic a cause as an eruptive fever.

The bad quality of the milk, or rather its insufficiency, the want of salubrious hygienic conditions, *overcrowding*, the prolonged stay in hospitals or in small ill-ventilated rooms, very rapidly become efficient causes in the production of that cachectic state in which superficial gangrenes make their appearance.

These little creatures very rapidly fall into a state of marasmus which carries them off after considerable emaciation, and which concurs to give them that decrepit aspect of which we have spoken. Death at length supervenes through affections of the digestive or respiratory organs, which become the seat of severe functional disturbance, accompanied by ultimate lesions of more or less importance. If these species of gangrene (*gangrene of the mouth, phagedenic gangrene, yellow eschars*) are studied in their entirety, we recognise the great analogy between them, and we are struck by the resemblance of their principal characters.

At the same time, we are surprised that among the numerous authors who have written on infantile diseases none have placed them in the same group. The greater number, on the contrary, have allowed themselves to be guided exclusively in their observation by the difference in seat, and the different tissues affected; and yet when they are clinically studied it becomes evident that whatever may be their seat they are exactly identical.

The three forms we have here admitted, following Dr. BOULEYET, and of which we have only described one, might, strictly speaking, be suppressed, so much are they like each other. We have, nevertheless, adopted them, as they facilitate a complete description, and faithfully represent the principal shades observed at the bed-side of the patient. An attentive observation renders it evident that these three forms are in reality but slight variations, the result of the more or less rapid progress of the same disease. Many times we have had under our own observation a clinical proof of these facts. We are enabled to furnish, not merely various instances demonstrating the identity of these morbid phenomena, but a considerable number of cases in which these different forms of gangrene existed simultaneously in *the same patient*. This circumstance establishes their identity clearly, and has been noticed by SAUVAGES. In observing, moreover, the circumstances under which these varieties of gangrene are produced, in studying the process of destruction, which varies but little, and, finally, in calling to mind the gravity of the prognosis common to all the varieties, we can scarcely doubt their complete identity. We have seen too many striking cases of the unity of this gangrenous disease not to insist upon these facts, which are of great importance. Thus we have seen the phagedenic form suddenly assume a rapid progress, passing into black gangrene, with the large eschars described by all the authors.

We have also seen some few cases in which gangrene progressed rapidly at its commencement, having in a few days produced black eschars, affecting the dermis to a considerable extent, and then, either under the influence of an improving general condition, or of the power of resistance of the patient, the local lesion lost its rapidity of progress, and the disease then continued assuming the aspect of *asthenic* phagedenic gangrene.

KLAATSCH and HESSE had remarked the whitish colour of certain infantile gangrenes, on which account they have likened them to what they termed the gelatinous softening of the stomach and the uterus.

Among all the *post-mortem* examinations of children who have died in consequence of cachectic gangrene, a certain number presented phagedenic ulcers of the larynx. But to appreciate the degree of their frequency we must observe that the exploration of the larynx has only been carefully performed since our attention has been drawn to the lesions peculiar to this organ. On dissecting infants who have died in the conditions in which the preceding phagedenic and gangrenous ulcers are developed, the larynx nearly always presents very small ulcers with sinuous borders, exhibiting in miniature the phagedenic ulcers of the vulva or of the cutaneous surface. They are generally seated at the point of union of the vocal ligaments at the anterior or posterior surface of the larynx: and their borders are distinctly perpendicular, as if they had been produced by a punch of irregular shape. In most cases the mucous membrane only is destroyed, and the bottom of these ulcers is filled with a putrid sanies having a strong gangrenous odour.

This detritus never presents the least trace of a pseudo-membrane; it is always formed of a yellowish matter, which escapes under a small stream of water, and exposes either the sub-mucous cellular tissue or one of the muscles of the

larynx. Sometimes one of the sinuses is the seat of one of these ulcers. Then it may happen, as we have observed, that the ulcer spreads over the whole extent of the mucous membrane of the sinus, reducing it to a gangrenous mass; and a perforation is produced on the corresponding side of the larynx, which permits the spreading of the serpiginous ulcer upon the mucous membrane of the pharynx. These ulcers are sometimes pretty numerous in the same larynx; two or three of them are frequently seen at the same time upon the inferior surface of the epiglottis.

They may be exceedingly small, a pin's head will sometimes fill up their cavity, but whatever may be their dimensions they always have the same appearance and characters. It is a singular fact that, excepting these ulcers, the number of which varies, the larynx usually presents no other alteration; sometimes, nevertheless, the mucous membrane is redder than in the normal condition.

Most frequently these lesions of the larynx are revealed during life by partial aphonia, but we have never seen a case in which they produced any considerable dyspnoea.

It is not uninteresting to notice this almost complete absence of dyspnoea in affections which are generally the ultimate complications of morbilli, whilst in laryngitis, morbillous from the commencement, the dyspnoea on the contrary sometimes assumes such an intensity that, before the appearance of the exanthem, it may induce a belief in the existence of croup.

These laryngeal alterations are more frequent than is generally supposed: they exist in most cases concurrently with phagedenic and gangrenous ulcers in other parts of the body. In many cases they pass unnoticed, as the aphonia of the patients is referred to the great debility into which they are thrown by the cachexia which caused all these lesions.

We once saw (in company with Dr. LEGENDRE) in the body of a young sweep who died from morbilli, laryngeal ulcers of a characteristic aspect, without any appearance during life of cutaneous or mucous gangrene. We should, however, add that the lungs contained a considerable number of circumscribed spots, the centres of which presented a gangrenous softening.

In a certain number of dissections of infants who, during life, had several of these gangrenes at the same time, we found pulmonary alterations, proving the putridity of the cachexia which had carried them off. The alterations consisted of circumscribed nodules existing within the parenchyma of the lungs. These parts had lost the proper structure of the tissue of the organ, and formed compact masses, uniform in structure and of a dark purple colour, as if ecchymotic; they also emitted a strongly gangrenous odour. In the centre of these nodules, which did not exceed the volume of a hazelnut, we have frequently observed a sort of central softening resembling the gangrenous sanies.

We ought, however, to observe—still borrowing from the work before cited—that a more attentive examination of these gangrenous affections has enabled us to characterise more clearly the most frequent cachexia which accompanies them, and which is nothing else than the scorbutic cachexia. We found our opinion as to the scorbutic nature of these affections on the following reasons:

- 1.—The coexistence of a special cachexia, neither tubercular nor rachitic (in the form of pale scurvy).

- 2.—The presence of petechiæ and ecchymoses upon the limbs and the face, accompanying either the phagedenic ulcer of the gums and the mouth, or those of the groin, the armpit, the perinæum, &c.

- 3.—The coexistence, especially as a terminal affection, of special anasarca and of dysentery.

4.—The coexistence, under the same circumstances, of pulmonary apoplexy.

We should add that, without giving to the word *scorbutus* the generality which is given to it by VAN-SWIETEN and OLAUS BORRICHYUS, who made it synonymous with the word *cachexia*, it is, on the other hand, a great error, which is frequently committed, to consider it as only the name of a special disease, as, for instance, of sailors. We see in the scorbutic cachexia an element common to various diseases, chiefly of a chronic nature, just as adynamia and ataxia constitute a common element of various acute diseases.

The latter assertions are very easily verified in children affected with chronic diseases during the second and third periods of infancy. It may be added, that in proportion as the patients approach adult age, they may, under the influence of different diseases, fall into the scorbutic cachexia, the characters of which become more marked the older the children become, the longer the disease continues, and the more hygienic precautions have been neglected. In the newborn, the scorbutic cachexia does not assume the decided character observed at a later age. The cachexias of the first period of infancy seem in some sort independent of scurvy; but though the scorbutic element is frequently absent, they present, nevertheless, a special physiognomy which is very characteristic.

CASE X.—*Phagedenic gangrene*.—Delphine Lemé, aged five and a half years, entered the ward of Saint Catherine, March 22, 1851. The child had left the ward about a fortnight. She had been admitted for an aphthous affection, which was cured spontaneously. This time she entered with morbilli in full eruption, attended by an intense dyspnoea and mucous râles over the whole of the chest. The patient was strong and vigorous for her age, well-formed, and plump. On examining the mouth an ulcerous line was seen on the borders of the superior and inferior gums. This line was covered with semi-coagulated blood, and the least contact, or even the cries of the child, were sufficient to cause the escape of a large quantity.

The rest of the gums were tumefied and of a bright red; the buccal mucous membrane was also of a marked red colour. The morbillous eruption proceeded in its usual course, presenting, however, an inflammatory form sufficiently marked to indicate the necessity of cupping.

On the morning of the 25th the general condition was still very serious, the dyspnœa intense, and the signs furnished by auscultation had not changed. The gingival ulceration had destroyed the undulating margins of the gums. The ulcerous lines were covered with a white caseous exudation; they had lost the ecchymotic and black aspect which they previously exhibited. On exploring the vulva, to see whether any ulceration existed, we found upon the whole mucous membrane a great number of minute, whitish, opaque spots, scarcely elevated above the mucous membrane, seemingly formed by a thickening and a slight elevation of the epithelium; they were generally of a round form and of the dimensions of a hempseed. They were so numerous that they frequently touched each other, and by their union formed patches of various forms. Then an ulcer in the centre of these patches was observed. In these spots the whitish pellicle was broken, and exhibited a humid surface of a rosy-grey colour beneath. On examining the point of junction between the skin and the genital mucous membrane, a line formed by the spots was seen which terminated abruptly at the point where the skin commences and the mucous membrane ceases. This line was well-defined, and the spots resembled a very regular belt situated exactly at the separation of the two species of integument.

On the 26th the general condition was very serious, the skin hot and dry, the morbillous maculæ half effaced. Auscultation demonstrated the existence of a harsh murmur in the right lung, and fine mucous râles in the rest of the chest. The gingival ulceration had made some progress; the caseous layer which covered it could not be detached like a pseudo-membrane; the least friction caused blood to flow in abundance, and the gingival tissue had, to a considerable extent, lost its normal colour; it seemed no longer to adhere either to the neck of the teeth or to the maxillary bones. As far as the eye could penetrate, the existence of the ulcerous border was traced upon both the jaws. On the internal surface of the inferior lip—upon that part which, in the usual position of the organ, is in contact with the gingival ulcerous line—are seen a number of small, whitish, caseous, slightly elevated clots, which are easily detached, exposing a bleeding and very superficially-ulcerated surface.

The vulva was almost entirely converted into a large ulcer. The minute spots which commenced yesterday had become enlarged and almost all united, forming upon each lip an ulcer which occupied its entire surface. These ulcers had perpendicular edges, cleanly cut, and were very sinuous; their bases were whitish, without any pellicle,

very humid and sanious. All around these surfaces there existed other small whitish spots, the epithelium of which seemed to be at the same time thickened and raised. The kind of belt seen yesterday is no longer perceptible, having been transformed into very irregular ulcers, but of the same character as those just described. Similar ulcers appeared around the anus and upon the perinæum.

On the 27th the general condition continues the same; the voice and cough are weaker, the agitation is extreme, the gums are completely converted into soft, yellow eschars resembling amadou. The ulcers of the vulva are still spreading superficially and in depth; their appearance continues the same.

The 28th.—The eschars of the gums have enormously increased. Thus, not merely all the gingival tissue seems to be converted into yellow eschars, but also the bottom of the gingivo-buccal folds appears to be affected. The mucous membrane of the cheeks, both above and below, assumes a yellow colour. On gently raising one of the lips the adjoining part of the gum is removed along with it. This unusual detachment shows that the whole gingival tissue has lost its adherence to the neck of the teeth and the maxillary bones. The teeth, twenty in number, are all sound, but very loose. The appearance of the vulva has changed; several of the ulcers which did not previously touch each other have united, new ones have appeared, the primary ulcers are deeper than they were yesterday, the centre is black and has a gangrenous aspect. About the anus irregular, whitish, opaque patches exist, apparently formed of an epithelial elevation and a slight thickening, beneath which there is a scarcely-perceptible serous exudation. The slightest friction ruptures this kind of vesicle and exposes the red and moist dermis; then this red surface very rapidly assumes a grey pultaceous appearance, becoming deeper and larger at the same time. Here and there are seen minute and very circumscribed spots, which appear to be primary, as if produced by the spontaneous ulceration of a mucous follicle. These spots progress as rapidly as the others, and within seven or eight hours they are converted into small irregular even surfaces, like those arising from the whitish vesicles. (Energetic cauterization with hydrochloric acid.)

Death occurred on the evening of the 28th. *Post-mortem* examination on the 30th.

The body was well formed and plump; traces of morbillous maculæ upon the thighs, the arms, and the chest; abdomen of a greenish colour; a line of the same colour is seen around the lips at the level of the gums. The exploration of the mouth shows that the whole gingival tissue of both the jaws was completely mortified; they were, in fact, converted into soft eschars of a yellowish colour, like that of pale amadou. The attachments to the teeth and the maxillary bones were so completely destroyed that in drawing the

lips forward the eschars of the gingival tissue followed the lips, and exposed the whole depth of the corresponding alveoli. In these situations the bones were absolutely blackened and deprived of their periosteum. The teeth were still fixed in the alveoli, but the slightest touch loosened them. The portion of the gum which is situated on the inner side of the teeth is precisely in the same state. The soft palate was only sound in a very small part of its extent, quite at its centre. The eschars have spread from each side towards the centre, and would certainly have reached it in a few hours but for the death of the patient. The larynx contained three ulcers of the size of a lentil; all of them were regular in form, with a greyish base and perpendicular edges. One was situated at the anterior junction of the vocal cords, between the two ventricles, with which it did not communicate. The two others were on the outer side of the arytenoid cartilage, and were nearly identical in form, seat, and appearance. The base of these ulcers was formed of the submucous cellular tissue.

The trachea, the large and smaller bronchi were of an intense reddish-violet colour. The tissue of the lungs admitted of being distended by insufflation, but at the right summit there existed to a considerable extent the lesion peculiar to catarrhal pneumonia, intermixed here and there with nodules of various sizes up to that of a hazelnut. They were formed by a disorganization of the pulmonary tissue, which in these spots was compact, and reddish-black in colour, with a very manifest and characteristic gangrenous odour. The left lung also contained lesions of catarrhal pneumonia.

The pleura, the bronchial glands, and the lungs presented no trace of tubercles.

The vulva had not much changed in aspect; cauterization had, however, rendered the ulcers of a yellowish colour.

Sections made in different directions demonstrated that these ulcers had not completely involved the whole thickness of the dermis, and that underneath the skin there was, in the vicinity of these ulcers, a kind of red vascular line.

All the other organs were sound.

CASE XI.—*Phagedenic gangrene*.—*Laryngeal ulcers*.—Emilie Laverdure, aged three and a half years, entered Saint Catherine's ward in the Hospital for Sick Children, February 9, 1849. The child is of dark complexion and well developed for her age. Her mother states that the child has had a cough for the last two days, and that the fever never left her all that time, the tears were flowing profusely.

February 10.—On examining the patient we find the fever very violent with redness of the face, apparently the precursor of measles. On auscultation we hear slight sonorous râles throughout the whole of the chest.

February 12.—The morbillous eruption is complete, but the cough and the fever, far from diminishing, are on the contrary more intense.

February 15.—The eruption has nearly disappeared, but the fever persists with its former violence; moreover, very fine subcrepitant râles are audible over the greater part of both lungs. During the last few days diarrhoea of a yellowish or sometimes of a greenish colour has supervened, and is unsuccessfully combated by preparations of opium.

February 18.—In addition to this serious state the child now presented asthenic, phagedenic ulcers upon the mucous membrane of the vulva and upon the skin of the left groin.

These ulcers were three in number; they were superficial, sinuous, with irregular borders and a rosy-grey base.

One of them was situated in the left genito-crural fold, a second upon the left side of the pubis, and the third around the clitoris. They resembled each other closely; the difference between the cutaneous tissue and that of the mucous membrane of the vulva did not produce any notable differential character. Excepting in size, and the more or less elongated or rounded form, the three ulcers completely resembled each other in respect of their common characters; that is to say, in being serpiginous and gangrenous, and in presenting that peculiar aspect to which the name of phagedenism is given.

Before applying any external medication, two inoculations were performed on February 20, upon the thighs of the patient, the inoculating liquid being carefully collected from the sanious molecular detritus of the centre of the ulcers. These inoculations were altogether unsuccessful.

In this serious condition of the patient we were enabled daily and hourly to observe the incessant progress of these ulcers. They did not appear at any time to be covered with pseudo-membranes. They constantly presented greyish, sanious surfaces, with an encroaching peripheric border, the bright colour and finely granulated aspect of which contrasted with the ulcerous centre, the appearance of which was humid, sanious, and dirty. All these surfaces became more humid towards the approach of death, thus presenting a resemblance to hospital gangrene. In the genito-crural fold and the groin we were enabled to follow the progress of these ulcers, and to observe their two modes of extension. Thus, besides the more or less rapid enlargement of these ulcers, after the manner of serpiginous phagedenic chancres, there supervened around them small pustules resembling the pustules of ecthyma; then, rapidly—in a few hours, they were replaced by a loss of substance only involving the skin, superficially at first, but which afterwards increased in surface and also in depth. Thus, in this child,

these ulcers acquired a considerable extent, especially in surface. The small newly-formed ulcers adjoined the larger ones, and the latter gradually covered the whole of the vulva, the perinæum, the genito-crural folds, the margin of the anus, and the fissure between the buttocks. Notwithstanding the enormous extent of this phagedenic gangrene, the cutaneous tissue did not seem to have been altogether destroyed during life, as these ulcers spread more on the surface than in depth.

The general condition became rapidly worse. The diarrhœa continued in its intensity, the fever increased and was accompanied by agitation and sleeplessness. The fine subcrepitant râles gave way to a loud blowing sound in the left lung. The voice became weaker, and a few days before death the diarrhœa suddenly ceased. The child now wasted away very rapidly, and died on the 5th of March, after a long agony accompanied with cries and permanent delirium.

The examination of the body was performed on the 6th of March. The lungs having been insufflated exhibited hepatisation on the left side at the posterior part of small extent. There was also a doubtful hepatisation on the posterior part of the right lung. The rest of the pulmonary substance on both sides presented the lesion peculiar to catarrhal pneumonia.

The bronchi were of a deep red from the trachea down to the smallest divisions into which they could be followed. Complete absence of tubercular granulations.

The larynx presented a peculiar aspect, from the level of the aryteno-epiglottidean folds to the base of the cricoid cartilage. The mucous membrane was of a blackish colour, as if it were covered with a dirty mucus. Moreover, there existed three ulcers of little depth, involving only the mucous membrane; two of them were situated above the vocal ligaments, and the third upon the inferior surface of the epiglottis. These three ulcers exactly resembled, in their round and irregular sinuous form, the phagedenic vulvar and cutaneous ulcers still existing upon the body. The resemblance became more striking on examining the details and peculiarities of these small ulcers, which did not exceed three or four millimeters in size. The borders were well defined, as if cut by a punch; the bottom was grey and sanious with a humid detritus. Some of them presented an appearance of pseudo-membrane.

The ulcers of the genital organs still presented after death the same external appearance that they had exhibited during life. A careful dissection showed that though the vulva was entirely converted into a large phagedenic and gangrenous ulcer, the latter had not penetrated to any great extent beyond the cutaneous integument. In one spot only of the groin had the skin been entirely destroyed, and the phagedenic ulceration had extended into the

subcutaneous cellular tissue. Incisions made in various directions exhibited the greater or lesser degree of attenuation of the dermis caused by the progress of the ulcer.

The buccal mucous membrane appeared to be in a normal condition. The abdominal cavity only presented some lesions in the large intestines, in which there were some slight traces of inflammation, here and there isolated follicles exhibited the marks of recent cicatrization, while some were still ulcerated.

The other organs were sound.

CASE XII.—*Asthenic, phagedenic gangrene of the vulva and the mouth.*—Victoire Brochard, aged four years, entered the ward of Saint Catherine, February 23, 1849. The patient was brought to the hospital by her mother, who stated that the child had for five days suffered from violent fever, vomiting, and cough. On examination we found the child strong and well developed for her age; eyes watery, eyelids slightly tumefied; tongue red at the tip, all the other part being white; cough strong and resounding, and the whole body covered with a fully developed morbillous eruption.

Auscultation demonstrated subcrepitant râles in the whole chest.

The vulva presented upon the external surface of the labia majora and minora, upon the clitoris, and in the vicinity of the fourchette, round, whitish spots of various sizes, with a slight central excoriation. These spots resemble ruptured pustules, which had been covered with a pulvaceous detritus of a greyish colour. The fever and diarrhœa were very intense.

February 25.—The eruption has begun to fade. The fever is still violent, and the diarrhœa is not diminishing, and is of a dark green colour. Respiratory organs in the same state. The appearance of the vulva is slightly modified, the pustules having partly disappeared and been replaced by an ulcer with a greyish bottom, which at first sight much resembles a pseudo-membrane; but, on examining it more closely and in trying to seize it with the forceps, we recognise without difficulty the mistake which can only occur on a very superficial examination. The gravity of the general condition in combination with the presence of a phagedenic vulvar gangrene induced us to explore the buccal cavity, in which we found a greyish black ulcerous margin on the gums, which, by its molecular progress, had completely destroyed the undulated gingival border, and laid bare all the teeth. (Two inoculations were on the same day performed on the thighs of the patient.)

February 26.—The fever is more intense; dyspnœa.

The vulva presents a more grey and sanious aspect, the pseudo-membranous appearance is less distinct. The ulcers make rapid progress.

The gums are destroyed more and more by the ulcer on their margins, which has laid bare several teeth, which, although perfectly

sound, have been dislodged from their aveoli by the action of buccal injections used for the purpose of cleansing the mouth of the patient.

February 27.—The ulcers of the vulva enlarge in surface and also somewhat in depth; new ulcerous spots are being developed around the anus and the vaginal orifice. These ulcers spread with their borders upon the sound parts, forming a sort of peripheric hem, the colour of which differs from that of the centre of the ulcerous surface.

The disorder makes equal progress in the mouth; certain spots on the maxillæ are already denuded and exposed. The general condition becomes worse.

March 1.—State of health very serious. The aspect of the vulva is not modified nor the progress of the lesions arrested. A careful examination of the mouth shows that the whole tissue of the gums is affected by a phagedenic ulcer; the right half of the upper jaw is completely destroyed to the level of the first molars, whilst on the left side the undulating margin scarcely remains. In the lower jaw the gums of the canine teeth and the incisors are so far destroyed as to expose the maxillary bone with its empty aveoli. The ulcer which has thus rapidly corroded away the dense and close tissue of the gum is grey in colour: it is distinctly seen to be covered with a sanious detritus, whence the least touch causes the blood to flow.

March 2.—The mouth presents for the first time a diphtheritic aspect. There exists indeed upon those portions of the gums not yet destroyed, a pellicular, whitish, extremely thin layer, somewhat resembling coagulated mucus. On seizing it with the forceps it may be detached, when it is found that these several layers exist superposed upon each other. There is no similar disposition in the vulva; but the ulcers gradually increase in size. It may be said that all the external parts of the genital organs are converted into an enormous phagedenic, gangrenous ulcer.

March 3.—The child is in such a state that death is imminent, the voice is quite inaudible, the subcrepitan râles are replaced in the superior lobe of the right lung by a blowing murmur which is not very distinct.

The patient died on the morning of the 4th of March.

The autopsy, performed on the fifth, yielded the following results: Body well formed and but little emaciated; face somewhat tumefied by a hard œdema, especially on the lower lip and the cheeks. Here and there, and more especially on the inferior limbs, are seen brownish maculæ, apparently the traces of the previous morbillous eruption. The traces of the punctures made for the purpose of inoculation, which proved unsuccessful, could only be found with difficulty. The vulva, the perinæum, the genito-crural folds, and

the circumference of the anus were the seat of a large ulcer which no longer presented a uniform colour. A small quantity of blood having been exuded upon some spots, a blackish colour resulted from it which, at first sight, induced us to believe in the presence of black gangrenous eschars, more or less solid; but the slightest washing detached this coagulated blood, combined with molecular detritus, when it was easy to recognise again the aspect and the colour which this ulcer had presented during life. Sections made in various directions proved that the thickness of the dermis had not been completely destroyed in any part.

The lungs could be insufflated in their whole extent, excepting at a very circumscribed spot in the posterior part of the right side. The bronchi were red and injected, even to their smaller divisions.

The larynx, carefully opened by an incision on its posterior surface, showed that from its superior aperture to the commencement of the trachea the whole mucous membrane had been reduced into true gangrenous sloughs. This pulraceous detritus was immediately removed by a little water, showing that there existed no pseudo-membrane, nor any circumscribed phagedenic ulceration analogous to those often met with in similar cases. This sanious detritus of the larynx terminated abruptly at the commencement of the trachea, without any apparent transition between the congested state of the trachea and this striking aspect of the larynx. The mouth presented the following alterations: In the upper jaw the whole of the right side is deprived of the gum, the maxilla is completely necrosed and blackened. Some alveoli still contain their teeth, but they are not adherent. The teeth are all sound, but are covered with a thin layer of tartar mixed with gangrenous detritus. Upon the left side of the upper jaw the gum still exists in part, but it has lost its adhesion to the maxillary bone, so that the slightest traction of the cheek detaches it from the necrosed bone. The same alterations exist upon the anterior part of the lower jaw.

Notwithstanding our investigations we were unable to detect again the thin pellicles of diphtheritic appearance which were perceptible on the preceding days.

The cervical glands were not perceptibly inflamed; no trace of tubercles. In the abdominal cavity the small intestine offered nothing noteworthy. The large intestine presented a very manifest diffuse enteritis with isolated follicles slightly injected and enlarged.

The liver and the spleen, as well as the other organs, were healthy.

SECTION V.—CACHECTIC DIPHTHERIA.

We have no intention of undertaking a complete description of this important disease. Our object is the much more

modest one of drawing attention to a fact which has not yet attracted the attention of observers; in fact, we wish to show that the diphtheritic disease possesses, besides its numerous acute manifestations, as revealed in croup, pseudo-membranous angina, acute pseudo-membranous coryza, &c., another mode of existence in which it is, so to say, decomposed. In that case there is no longer an important, serious, and deadly disease, having a special action upon the whole economy. In the cases to which we allude diphtheria is, on the contrary, reduced to its simplest element—the anatomo-pathological lesion, that is to say, the pseudo-membrane.

As shown in the works of M. ROBIN and in the excellent monograph on diphtheritic affections by Dr. ISAMBERT,* pseudo-membranous exudations are of two different orders: the first are capable of organisation, such as those of serous membranes, or those of blisters; the second, which are not organisable, constitute the diphtheritic lesion which is produced in croup, angina, &c., and on wounds and excoriated surfaces when diphtheria is epidemic.

Microscopic observations have clearly separated diphtheritic lesions from the whitish pultaceous exudations observed in simple cynanche tonsillaris, these exudations being merely formed of sebaceous matter and concrete mucus. Without, therefore, in any way denying that diphtheria is a serious general disease, we wish merely to show that its chief anatomo-pathological element frequently appears in an isolated form, without being attended by the ordinary general symptoms. It is, indeed, by no means rare to meet, in the course of various grave, acute, or chronic diseases terminating in death, with pseudo-membranes as an ultimate phenomenon. We have collected a certain number of cases where this coincidence had an evident significance. The cases of M. GILBERT, in his treatise on diphtheritic ophthal-

* *Archives de Médecine*, 1857.

mia, are mostly to the same effect, as well as those furnished by M. GRAEFE. With regard to the etiology of diphtheritic ophthalmia M. GILBERT observes as follows: "Diphtheria of the eye frequently supervenes in the course of some other disease of the internal organs, as we have observed in three children suffering from morbilli and hooping cough. GRAEFE has, in forty children attacked by diphtheria, seen death supervene in three cases from croup: he has also frequently observed diphtheritic patches at the nasal apertures, the angles of the mouth, and upon the denuded surface of blisters. The dental eruption appeared to GRAEFE to have a real influence too often repeated to have been a mere coincidence. This, also, holds good in regard to congenital syphilis; for, of forty cases, eight were accompanied with undoubted syphilitic symptoms."

The same author adds, in respect to the prognosis—"But can the affection of the eye alone cause death? If in replying to this question we are merely to rest satisfied with the results of our observation, we should be compelled to conclude that diphtheritic ophthalmia is one of the most serious diseases that exists, since of five children attacked with it four have died. But we must observe that two of them only have been seized while in a state of good health, and, moreover, the first of them came from an asylum, where the hygienic conditions were far from desirable; it died from the progress of ophthalmia alone. The three others were ill for a long time—two in consequence of morbilli, and the third from the sequelæ of hooping cough which had much enfeebled him."

Cutaneous diphtheria may be observed upon every part of the surface where the skin has been deprived of its epidermis, on wounds and in the folds of the skin where the latter is constantly humid, it thus appears around the nostrils, the lips, behind the ears, &c.

Beneath these pseudo-membranes, which adhere rather firmly to the dermis, an ulcer exists. It was long believed that the presence of this slight ulceration was a distinctive mark which separated cutaneous diphtheria from that of the mucous membranes, because it was supposed that upon the latter the pseudo-membrane was formed above the epithelium, and consequently without ulceration. But from microscopical observations it appears correct to admit that the integrity of the subjacent mucous membrane is only apparent. But what we cannot help acknowledging is, that, in most cases, the pseudo-membrane does not repose upon an ulcer of sufficient extent to deserve the name of a loss of substance.

In the great majority of cases it is constituted by a scarcely perceptible ulceration, so that it is liable to be ignored until submitted to the microscope. This is observed in croup and in many cases of pseudo-membranous angina. And yet there are numerous cases recorded in which diphtheritic patches completely covered deep, aufractuons, and sanious ulcers. And in many of these, diphtheria was but a secondary phenomenon; the ulceration was the principal and important fact, as, for instance, in a certain form of *ulceromembranous stomatitis*.

Every one knows that, in studying diphtheritic patches, however they have been produced, they are always found to be identical, notwithstanding their difference in aspect, colour, and consistence.

But are there not profound nosological dissimilarities in a lesion which, it is true, presents itself as identical from a chemical or microscopical point of view, and yet is so different when clinically analysed? What comparison can be made between croup, certain pseudo-membranous anginae, coryza, and those by no means rare cases where diphtheria occurs suddenly, without the concurrence of any epidemic or any

appreciable contagion, and complicates a cachectic state to which it is superadded, without perceptibly augmenting the gravity of the general condition? What comparison can be established between croup, &c., and those ulcerous buccal affections, so irregular in their progress, which are at times so rapidly ameliorated *spontaneously*, and which again, at other times, so rapidly pass into phagedenic ulcers and are most frequently fatal? In these kinds of stomatitis, it frequently happens that true pseudo-membranes momentarily cover these ulcers, without modifying the severity of the case.

For this reason we cannot prevent ourselves, notwithstanding the great authority of M. BRETONNEAU, from completely separating from croup and diphtheria, as an important general disease, what has been described by that illustrious practitioner under the name of stomatitis, &c.*

Must it not be evident to most observers that, not circumscribing diphtheria, such as it is, and as it manifests itself in the generality of cases, must lead to confusion? Thus: we have said how many times phagedenic and gangrenous affections are called diphtheritic; sometimes from a deceptive appearance of pseudo-membrane, at other times from the temporary and most frequently ultimate existence of a pseudo-membrane, which shows itself upon ulcers which have existed for a certain time. Thus it has occurred that French, and especially foreign physicians, opposed to such an extended generalisation, assume that diphtheria is but the result of a violent inflammation. In point of fact, the diphtheritic element has been observed to complicate the most dissimilar pathological cases.

It appears to us that, without depriving diphtheria of its specific characters, so well defined by eminent authorities, our view might be accepted, which, on the contrary, to some extent separates this severe disease from all the cases

* *Traité de la Diphtérie.* Paris, 1826.

with which it is constantly confounded, such as gangrenes or ulcers. There is, in short, a connection to be established between the pseudo-membrane and the greater part of cachectic cutaneous diseases, in which every lesion may be the expression of a great disease; as, for instance, the pustule of variola, and the pustular element, which may in its turn, separately from other variolic symptoms, concur to express another disease—cachectic ecthyma.

Besides the results of our clinical observations, we have other proofs in support of what we believe to be the truth. These are the distinctions made by clinical physicians who, meeting with unusual cases, are induced to give to these forms of diphtheria denominations which distinguish them from what may be termed the type of diphtheritic disease.

MM. RILLIET and BARTHEZ* speaking of *secondary* pseudo-membranous laryngitis, observe: "Nearly all the children were debilitated by previous disease, and the affection in the course of which laryngitis developed itself was mostly a tertiary or quaternary affection; that is to say that two or three diseases succeeded each other in the same patient. It was, however, in the course of primary and secondary scarlatina that we have most frequently observed laryngitis (three times); then in secondary and complicated morbilli (twice); secondary pneumonia (twice); typhoid fever and enteritis (once).

"No occasional cause could account for the development of the disease." With regard to the prognosis, these authors add—"The prognosis of secondary pseudo-membranous laryngitis is mostly subordinate to the disease in the course of which it is developed. We must confine ourselves to the observation that in a case where the primary affection is not very serious, and the pseudo-membrane of small extent, the absence of a feeling of suffocation, and extreme dyspnoea, leaves room for hope."

* *Traité des Maladies des Enfants*; t. i, p. 351.

There are a goodly number of cases recorded in which diphtheria occurred as a complication of serious fevers. Dr. OULMONT* cites eight cases of pseudo-membranous angina, six of which supervened in individuals attacked by typhoid fevers; one in a man who had a double pneumonia, and in another case it appeared in the course of a tubercular peritonitis. MM. LOUIS and FORGET, of Strasbourg, have furnished similar instances.

Diphtheritic lesion may, in short, as frequently observed, make its appearance in severe cases in which the adynamia is considerable. It is by no means necessary that diphtheria should have played a part in the production of this general condition. It occurs as an ultimate phenomena, called forth, as it were, by the adynamia itself. It is in this way that this lesion may in very severe and essentially adynamic anginae lead to confusion in our diagnosis. Though it be exactly true, as shown by the learned physician of Tours, that pseudo-membranous anginae were formerly always called gangrenous, it is not less true to admit that there are gangrenous, septic anginae, fatal in the highest degree.

Surgeons have also described diphtheritic complications as constantly supervening under bad hygienic conditions, in cases of considerable traumatic lesions. It is very true that under the name of diphtheritis many had to do with phagedenic gangrene; but it is equally true that in certain adynamic traumatic cases diphtheritic patches supervene and play the part of an ultimate lesion. Should, however, against our expectation, our view, founded on the idea of separating the great nosological species, called diphtheria by our teachers, not be accepted, how can those rare but incontestable facts be explained when diphtheritic lesion appears without producing the slightest symptoms? We have twice witnessed in two boys, in the interval of several

* *Archives de Médecine*, 1856.

years, the appearance of a perfectly solid and coherent pseudo-membrane, which lined the whole mucous membrane of the prepuce. The pseudo-membranous balano-posthitis commenced at the corona of the glans, was reflected at the bottom of the cul-de-sac, and reached the edge of the prepuce, where it stopped. In these two cases I was enabled to seize the pseudo-membrane with the forceps, and to raise and detach it in its integrity. It presented all the characters of diphtheria: the mucous membrane was of a vivid red and scarcely ulcerated. These two children were thus seized independently of any epidemic influence, and neither of them presented during the following days any abnormal phenomena. Dr. ISAMBERT reports in his work a case of pseudo-membranous balano-posthitis in a pupil at the Hospital for Children, unattended by any other diphtheritic symptoms.

Cutaneous diphtheria is sufficiently common, but to us it mostly appeared as an ultimate phenomenon to which we have alluded, and to which we would call the attention of observers, being thoroughly convinced that there exists much confusion on this subject which a severe nosological study will remove. The pseudo-membranes which line the auditory canals, the vulva, the circumference of the ears, the conjunctiva, &c., must, in our view, be specially classed in the category of ultimate cachectic diphtheria. Practitioners sometimes consider them as more serious cases of diphtheria. But this is in our opinion a *petitio principii*, for it is not diphtheria as a general disease which supervenes in these affections, but on the contrary an ultimate diphtheritic lesion superadded to an adynamic or other serious general condition.

CASE XIII.—*Asthenic phagedenic gangrene with ultimate diphtheritis*.—François Bienvenue, aged five years, entered Saint Augustine's ward, in the Hospital for Children, September 17, 1849,

to be treated for rhachitis, to which he had been subject for some months.

October 18.—The patient, who seemed improved under the influence of fish-oil, was suddenly attacked by an intense fever with cough and lachrymation. Removed on the ninth to the ward of Saint Thomas.

October 11.—In the morning a complete eruption of pale morbilli, not much marked upon some parts of the body. Gums red, tumefied with a decided ulcerous border.

October 13.—In the evening there is observed upon the lower lip, near the left commissure, an aphthous patch, of the size of a bean, of which nothing had been seen in the morning. The surface is white and caseous.

October 14.—In the morning the patch is larger, the bottom has the same aspect, but the borders are perpendicular. A little further back upon the internal surface of the left cheek, aphthous, white, very superficial spots are seen, which also exist here and there upon the internal surface of the lower lip, opposite to the incision. The ulcerous line of the gums is more distinct and more prolonged, encroaching towards the molars; the gums are more tumefied and red than on the preceding days. The slightest contact, even the cries of the child alone, cause a certain quantity of blood to escape by the ulcerated surfaces. The breath is very fetid. The general condition grave.

October 14.—In the evening the principal ulcer is enlarged, the base becomes hard and forms a slight eminence, the surface contains coagulated blood mixed with sanious detritus, presenting a gangrenous aspect. (Cauterization with hydro-chloric acid.)

October 15.—General state the same. The eruption still exists upon the face and the trunk; auscultation discloses mucous rhonchi in both lungs. The mouth presents no change, excepting that the ulcerous line is progressing and that the gums become seemingly detached, so that the simple traction of one of the lips removes the gums from the teeth. A certain quantity of blood exudes from the buccal mucous membrane, but it is difficult to ascertain the spots from which it escapes. (Two canterizations.)

October 16.—General state the same. Cough hoarse but moderate. The ulcer is white and caseous; the white spots upon the mucous membrane are now converted into surfaces resembling the principal ulcer, with which several of these surfaces have, by their enlargement, become united, whilst others have united separately, so that there exists an ulcerous stripe which occupies the whole inter-dental space of the internal surface of the left cheek and the inferior lip. The gingival ulcerous border tends to reach the internal surface of the teeth, across the dental interstices. The ulcerous line is throughout grey, sanious, without any pellicular appearance. The breath is very fetid, but without any gangrenous odour.

October 17.—Same general condition. The mucous rhonchi and dyspnoea do not diminish; the ulcers appear deeper, the surfaces contain a whitish, filamentous detritus, adhering partly to the cheek and partly to the teeth, which are incrustated with a dirty yellow tartar to the level of the linear gingival ulceration. The cervical glands are slightly tumefied; the breath assumes a gangrenous odour. (Cauterization with a concentrated solution of nitrate of silver.)

October 18.—All the ulcers present a whitish caseous aspect, excepting those covered by the eschars caused by the cauterization of yesterday. The gingival ulcerous line on the upper jaw has reached the internal surface of the teeth. Regular festooned curves are forming, approaching the palatine arch. General condition the same; the face is pale and puffy.

October 19.—No change, excepting a slight swelling of the left cheek.

October 21.—The ulcers have a pellicular aspect; their surfaces are neither so much granulated nor so caseous. On examining them, however, more closely, it is found that there exists only a pul-taceous whitish layer mixed with the ulcerous detritus, and that it is impossible either to detect or to seize any pseudo-membrane. Attempts to seize it caused the blood to gush forth. The eyes, on the contrary, are the seat of a pellicular exudation of perfect regularity; the palpebral conjunctivæ are covered with a pseudo-membrane from two to three millimeters in thickness, which lines them throughout. It may be easily seized on the palpebral margin and detached by gentle traction, like a piece of moist paper adhering to a plain surface. The mucous membrane beneath these exudations appears perfectly sound, presenting, however, a slight diffused redness. The ocular conjunctivæ are not thus covered; but some exudation manifestly exists in the deeper parts, as may be seen on opening the eyelids. (Cauterization of the eyes with a solution of nitrate of silver.)

October 23.—The ocular pseudo-membranes appear diffuent; they are limited to the palpebral mucous membrane.

The eye itself is normal, but its mucous membrane appears rather red on the left side. The eyelashes are almost constantly agglutinated, keeping the eye constantly closed. A purulent discharge accumulates upon the mucous membrane and distends the eyelids so that they project. The mouth is in a deplorable state, the mucous membrane is ulcerated, several teeth have left their alveoli, corresponding to the points where the ulcers have left the alveolar borders completely denuded. The left cheek is distended by a hard and shining œdema. On closely examining the buccal lesions, we find on the internal surface of the left cheek an ulcer of a dirty white colour and anfractuous, with irregular perpendicular borders. The teeth in contact with it leave their impressions upon the surface.

The mucous surfaces of the two lips are the seat of transversally elongated ulcers, which are in immediate contact with the ulcerous lines of the corresponding gums. All these ulcers are finely granulated, caseous, and pultaceous, while those of the gums are greyish and soft. The irrigations to cleanse the mouth of the patient have been sufficient to dislodge the teeth. Amidst these local disorders the general condition remains nearly the same; the fever and dyspnoea scarcely increase; stethoscopic signs nearly the same; appetite still preserved; no diarrhoea. The child is almost constantly doubled up, placing, by a considerable flexion of the trunk, its head upon its legs, or concealing itself beneath the bed-clothes. (Cauterization on the twenty-fourth, with hydro-chloric acid.)

October 25.—General state the same. The ocular pseudo-membranes are but little apparent, still a slight whitish pellicle may be distinguished, like fine gauze, upon the palpebral mucous membrane. The buccal ulcerations are cleaner, and are generally of a whitish colour. (Two cauterizations, with hydro-chloric acid.)

October 26.—The ulcerations of the gums are improving; they present here and there some rosy spots tending to cicatrization. The ulcer of the left cheek is still considerable; it is difficult to see its extent, as the jaws cannot be completely opened on account of the tumefaction and the pain the movement excites.

October 27.—General condition less satisfactory; fever more violent; prostration considerable; the eyes are almost constantly closed, especially the left eye, which presents a slight pellicular film upon the palpebral mucous membrane. The ulcer of the mouth is callous; nevertheless the ulcerous line of the gums seems to diminish in its progress.

October 29.—One of the lower incisors, which was loose and was supposed to obstruct the cicatrization, has been removed. (Inoculation with the purulent discharge from the eye upon the internal surface of the left thigh, and inoculation with the buccal discharge upon the right thigh.)

The general state becomes more serious; dyspnoea increases. The ulcer of the left cheek is surrounded by extensive oedema, with peripheric callosities, so resisting that the jaws cannot be opened. The oedema extends beyond the corresponding eye to the temporal fossa.

October 30.—The face is more swelled, the eyes are incrustated with a concrete pus, which, mixing with the eyelashes, renders it difficult to open them.

The palpebral and ocular conjunctivæ are lined with pseudo-membrane, which can easily be detached with the forceps. Dyspnoea increases, with frequent cries. The inoculation upon the left thigh shows no trace; that upon the right thigh presents a large rosy spot.

October 31.—The child is this morning in a desperate state:

the face is enormous, the lips are oedematous and whitish, the cheeks hard and glossy. In the interior of the mouth the ulcers are of a whitish grey, with considerable necrosis of the maxillary bones. Nothing indicates the complication of acute gangrene (black gangrene). Fever and dyspnoea are so intense that death seems imminent. Murmur in the posterior part of the left lung; delicate mucous rhonchi in the whole chest.

The inoculation performed upon the right thigh is recognisable by a red spot, as if there existed a very small pustule.

Death occurred in the afternoon.

Autopsy.—Body of a child deformed by rickets.

Both lungs, after insufflation, presented to a great extent the alterations peculiar to catarrhal pneumonia. The inferior part of the left lung permitted the passage of the air with difficulty.

The larynx was slightly injected. There existed immediately above the glottis, on the summit of the right arytenoid cartilage, a yellow, ulcerated, circumscribed spot, of little depth, about the size of a large pin's head. The trachea, the larger and the smaller bronchi, were of a deep red, from a considerable sanguineous injection.

The ulcer of the internal surface of the left cheek was black and covered with detritus; the inferior maxillary bone on the left side was in a state of necrosis in the whole extent of its alveolar border, and at the level of the separation of the diseased from the sound part there was observed the commencement of vascularisation and diminished density of the osseous tissue, remarkable, besides, by its greyish colour, due to a small quantity of liquid of an oily aspect.

Upon the palatine arch the mucous membrane was blackish, as if it were gangrenous on the surface; the soft parts had entirely separated from the bone. When an incision was made into this altered substance, the mucous membrane was found reduced to a pultaceous matter; the subjacent tissues, hard and lardaceous, creaked under the scalpel. This was also the case on the internal surface of the left cheek.

The peripheric callosities of the ulcer, so resisting during life, were still hard and lardaceous, like scirrhous tissues. The alveolar border of the left superior maxillary bone was also necrosed.

The right labial commissure was, at its internal part, the seat of a similar ulcer, the base and the circumference of which also presented callous tissues, creaking under the scalpel. A portion of the palatine arch was subjected to the examination of Dr. LEBERT, who considered that the surface full of detritus was the result of superficial gangrene. The cervical glands were enormous, but not one was tubercular. This was also the case in regard to the bronchial glands.

The eyes still contained the pseudo-membranes described. The ocular mucous membranes were sound, though slightly injected of a pale yellow colour. All the other organs were normal.

CASE XIV.—*Phagedenic gangrene.*—*Cachectic diphtheritis* (?).—Théophile Clerbaux, aged four and a half years, entered the ward of Saint Augustin, October 5, 1849. The child was brought to the hospital by persons who furnished no particulars whatever, excepting that the patient came from a very poor house in the street Saint-André-des-Arts.

The child is brown and vigorous for his age; he presents upon the right cheek a recent cicatrix, perhaps the result of a slight incision for the purpose of evacuating a small subcutaneous abscess. This patient is taken into the ward for an affection of the mouth. On examination there was found upon the internal surface of the right cheek an ulcer, commencing at the corresponding labial commissure and extending about 0.08. The undulating margin of the gums and the right edge of the tongue are also ulcerated. These ulcers are of greyish-black colour, with a bloody and sanious detritus; the teeth are loose and covered with a dirty yellow tartar. No fever; no swelling of the face; appetite and strength good. (Lotions are prescribed to cleanse the sanious ulcers, to enable us to appreciate their nature.)

October 6.—The lotions had changed the aspect of these ulcers; their surfaces were covered by an exudation perfectly white and caseous, resembling at first sight a sinuous pellicle upon their borders; the latter were surrounded by the buccal mucous membrane, presenting at the circumference a line of a vivid red colour. Around the ulcers on the internal surface of the cheek round whitish spots existed here and there, the larger of which were converted into small very superficial ulcers.

October 8.—The ulcers of the cheek present the same aspect. The ulcerous line of the gums seem to enlarge, and the right border of the tongue presents upon its ulcerous line the eminences and anfractuosités formed by the corresponding dental arch.

October 10.—Aspect the same, except that the centre of the ulcer of the cheek is slightly red, owing to the blood escaping from the ulcers. Breath fetid.

October 12.—The ulcerous border of the gums is cleaner, and is to a great extent replaced by a red line of separation. At the level of the right labial commissure cicatrized spots are seen upon the principal ulcer. The centre is still either of a sanious red or a caseous white, according as lotions are applied. More or less recently the child has grown somewhat pale; he is dull, without fever; appetite pretty good.

No change until the eighteenth, when both eyes are attacked by a catarrhal ophthalmia. Cauterization of the conjunctiva. State of the mouth the same.

October 22.—Second ocular cauterization. No change in the mouth.

October 23.—The patient is seized by violent fever with resonant cough. On the evening of the same day the maculæ of morbilli appear.

October 24.—The child is transferred to Saint John's ward. The morbillous eruption is complete but pale. Double pulmonary catarrh. Mouth nearly in the same state; but as the lotions had been interrupted for twenty-four hours on account of changing the ward, the aspect of the ulcers is more dirty and the breath more fetid. The parietes of the cheek are slightly tumefied, and the skin now presents a faint reddish tint.

October 25.—The size of the cheek is more considerable than the evening before, and the skin of a deeper colour. The breath, though very fetid, is not gangrenous. General condition more serious. (Energetic cauterization with pure hydro-chloric acid.)

October 26.—The jugal ulceration is somewhat cleaner, the bottom is whitish, but the borders are hard and nearly callous. The cedema of the cheek is considerable; the palpebral mucous membrane of the left eye is the seat of a slight pellicular transparent exudation of a yellowish-white colour. General state still serious.

October 29.—Local and general condition still the same. The diphtheritic exudation on the eye does not progress, and the mucous membrane is scarcely red.

October 30.—The ulcer of the cheek is surrounded by an induration more considerable and harder; a sanious and fetid discharge flows from the mouth. It is now difficult to explore the interior of the buccal cavity. The external surface of the cheek is smooth and red, especially around the small cicatrix before-mentioned.

October 31.—General condition very serious; the dyspnœa progresses considerably; the tumefaction and redness of the cheek increase. (Cauterization with hydro-chloric acid.)

November 1.—The right cheek is perforated; the aperture is round, like one made in leather by a punch; the cicatrix has disappeared. The cheek appears at the same time less tense and red. The interior of the mouth and the general state are unaltered.

November 2.—The perforation is slightly enlarged but still well defined; the parietes of the orifice appear to increase slowly; colour greyish-red. The gingival ulcerous line is in the same state. Ocular diphtheritis no longer presents itself; eyes bleared.

November 3.—The perforating ulcer is enlarged without any change in the regularity of its form; it increases in circumference. General state very grave. (Actual cautery applied to the ulcerous aperture.)

November 4.—Cutaneous orifice rather larger; colour whitish, with the same character.

November 6.—Slight buccal hæmorrhage, difficult to determine its source. Slight emaciation, loss of appetite. General state the

same. The fistulous sore enlarges gradually without losing its form; cauterization has produced no effect. The right eye is constantly closed; it contains no diphtheritic membrane, but between the laminae of the cornea there is an interstitial purulent extravasation. Pulse small but not very frequent; mucous rhonchi rather diminished; plumpness still considerable, but the child appears very dull: it passes whole days immoveable, the face upon the pillow, which is soiled by the bloody salivary liquid escaping from the fistula. (Inoculation performed upon the internal surface of each thigh, with the liquid taken from the ulcerated gums and the jugal ulcer.)

November 7.—The inoculations have produced no effect; general and local condition the same; a slight buccal hæmorrhage. (Opiate pills, wine of quinia, BAGNOL'S wine.)

November 11.—Nothing perceptible on the inoculated spots. The œdematous areola around the orifice appears to diminish; the ulcerous ring is sunk down to its borders; the reddish aspect is replaced by a whiter colour. General state the same. (Same prescriptions; dressing with camphor and quina, moistened with *eau de Rabel*.*)

November 13.—General health seems to improve. The borders of the ulcer are sunk, and the diameter of the fistula considerably diminished, with this peculiarity that the cutaneous orifice is considerably larger than that of the buccal mucous membrane, so that the fistula resembles a funnel. The surrounding parts which were swollen and œdematous are actually depressed so that the ulcer is now situated within a slight depression.

November 15.—External orifice still diminished, so much so that it is almost covered with a purulent liquid of a healthy aspect. Were it not that some air escapes during expiration one might think the aperture closed. The mouth can now be easily explored. There is still a large whitish ulcer with callous borders. The ulcers on the gums are not much changed; teeth black from cauterizations. The general condition is so satisfactory that we recommend that the child should leave its bed.

November 17.—The diminution of the orifice continues; it presents an aperture so small that a pin's head might cover it. The parietes of the cheek are soft and flabby; the right eye can be entirely opened; the opacity of the internal part of the cornea is complete. General health improving; appetite good.

November 19.—Local conditions the same, but the child seems dejected and refuses nourishment.

November 20.—The fever, which had for a long time been absent, reappears; respiration frequent; delicate mucous rhonchi

* The *eau de Rabel* is a mixture of three parts alcohol and one of sulphuric acid.—ED.

are heard at the base of both lungs. No change in the local state, except that around the small aperture in the cheek there is now a red areola with a callous border.

November 21.—The general condition takes a bad turn, and on examining the mouth it is found that the ulcer upon the internal surface of the cheek, of a greyish aspect, has advanced to the inferior lip in the vicinity of the right commissure. The ulcer, with its sinuous and irregular borders, is easily seen upon the lip. (M. BOULEY prescribes canterization, with pure hydro-chloric acid upon this surface which is no longer stationary, but has since yesterday made considerable progress.) I performed the canterization myself, taking care to touch all the ulcerated spots, the internal surface of the right cheek, the gums and the whole border of the tongue on the same side. On making, immediately after the canterization, an injection into the mouth to remove the acid, I perceived a considerable quantity of liquid escaping from the orifice. The obliteration of the aperture had been more apparent than real, or rather, the ulcerous process had been progressing, leaving upon the spot a detritus which concealed the tract of the fistula.

November 22.—The ulcer has resumed its former spreading character; its internal orifice is more than a centimeter in diameter. The surrounding œdema has also reappeared; the right eyelid is tense. The general state grows less satisfactory. No appetite nor sleep.

November 23.—The external orifice is larger than ever; its form is now oval, the great diameter transverse. The borders are perpendicular, the surface of a reddish grey is moistened by a liquid of a distinct oily appearance. The ulcer resembles that kind of chancre known by the name of *ulcus perforans*, which excavates deep and regular pits in the dense tissue of the gland. The whole cheek is of a vivid red and presents a well-marked œdema. The rest of the face is pale and altered. The dyspnoea and fever continue.

November 25.—General condition stationary, but the ulcer progresses and the alveoli appear completely denuded.

November 29.—General health stationary, perhaps a slight improvement in the external aspect of the patient and the œdema of the cheek.

December 1.—Marked improvement. The buccal ulcers are diminished; while those of the gums are cicatrizing at the extremities. The œdema is considerably diminished; the ulcerous surface of the cheek is of a rosy tint, which gives hope for an attempt at cure. The strength of the patient is satisfactory; he has recovered his appetite and should be permitted to get up from bed.

December 2.—The perforating ulcer has diminished; same satisfactory aspect; general health improving.

December 3.—The patient appears prostrate; refuses nourishment. Local state the same.

December 4.—The ulcer, without having changed its aspect, is evidently enlarged transversely; the buccal mucous membrane is, nevertheless, reproduced upon the parts which have been so long ulcerated. The gums are cicatrized, the teeth have remained loose, but those parts of the gums which have survived the ulceration present a cicatrized border at the spots where the ulcers existed. No other ulcerous surfaces are seen in the mouth, except the internal orifice of the fistula, which traverses the cheek perpendicularly.

December 5.—The patient sinks: all the tissues are pale and discoloured. In the evening, œdema of the right arm. The external ulcerous orifice is somewhat larger.

December 6.—Local state the same, but the œdema shows itself in the legs and the scrotum. Extravasation in the pleura of the right side; sweat and much dyspnoea; diarrhoea intense; twelve stools in the night from the fifth to the sixth. One of them shown to us contains a considerable quantity of blood. (Antiscorbutic syrup, vegetable diet, herb-juice, citron, cresses, wine, and quina.)

December 7.—The child died suddenly in the morning, from syncope, at the very moment when he asked for the chamber utensil.

Autopsy performed December 9, 1849.

Body emaciated, the extremities slightly infiltrated; face rather puffy. On opening the chest, hydro-thorax is discovered. On the left side the liquid was serous and in small quantity, while in the right the extravasation was considerable and turbid, with albuminous flakes. The base of the right lung was covered with an areolar cellular layer of coagulated fibrine from the recent pleurisy. The lung and the diaphragmatic pleura were slightly adherent by means of fibrine. The middle lobe of the right lung was the seat of an enormous extravasation of blood in the very centre of the parenchyma. The blood formed black compact masses, separated by parts of the lung tissue presenting an œdematous aspect, from which on pressure a frothy and bloody liquid escaped. Insufflation demonstrated that the rest of its structure was normal.

The pericardium contained a certain quantity of lemon-coloured serum with small albuminous clots.

The abdomen contained a considerable extravasation of serum. Stomach, kidneys, and liver, normal. The small intestine presented nothing but a few slightly vascular spots. The nearer we approach the termination of the large intestine the more injected and softened is the mucous membrane.

Near the extremity of the rectum there existed a thin layer of white matter, exuded from the mucous membrane, which is granulated, red, and moist beneath. All the organs are bloodless. No trace of tubercles. The mouth presented on the internal surface of

the right cheek, at the place where an ulcer had existed, a remarkable fibrous cicatrized tissue. The gums were completely cicatrized, but all the upper and lower molar teeth on the right side were laid bare, and the corresponding maxillary bones were denuded to a great extent, and to the whole depth of the alveolar border.

The ulcerous surfaces of the fistula presented the same aspect as during life, with its hard and callous margins. The conjunctivæ were perfectly healthy.

No traces of the spots where inoculation had been performed could be found on the thighs.

TREATMENT OF CACHECTIC CUTANEOUS DISEASES.

Generally speaking, it may be said that in all diseases composing this group the chief point is to combat the cachexia in whatever form it may appear. The first indication is to find out the causes which have thrown the economy into such a state of debility, and to remove them, if possible, by agents appropriate to the respective cases. The treatment is naturally divided into general and local. The first has for its object to modify and to improve the constitution. That object may, in new-born children, be attained by the milk of the nurse, tonic baths, and the strict observance of hygienic rules. In older children, substantial nourishment, aided by chalybeates and tonics, and fresh air, may produce the desired effect. When the cachexia is very decided, and results from a special cause, as from marsh-infection, scurvy, &c., special medications must necessarily be conjoined with general remedies. The local treatment is very variable; its importance is much less; but as it varies according to the species of disease, we shall concisely describe the particular treatment which each of them requires, without repeating what has just been stated with regard to general treatment.

A.—Treatment of Rupia.—Besides the general means, which ought to be energetically directed to strengthen the patient, the treatment of rupia scarcely consists in anything else than

in cleansing or puncturing the bullæ, and gently stimulating the ulcers which result from them. At other times it is necessary to cauterize actively, in order to prevent the invasion of phagedenic gangrene. The ulcers are generally conveniently dressed with the ointment of Canet, and lotions of sugared wine may be used.

B.—Treatment of Cachectic Ecthyma.—As in rupia, all our therapeutic treatment consists in the administration of remedies likely to restore a debilitated constitution. The local treatment is also the same. The ulcerated surfaces must be sometimes stimulated by touching them with fused nitrate of silver, or by washing them with aromatic decoctions, or with a solution of chloride of lime, or by sprinkling them over with cream of tartar.—(RAYER.)*

C.—Treatment of Phagedenic Gangrene.—This infantile disease is, as we have stated, mostly the result of a peculiar morbid condition succeeding eruptive fevers. Want, privation, and overcrowding are sufficient to produce the impoverished cachectic state, which appears to some extent necessary for the appearance of phagedenic gangrene. We can readily imagine the difficulties in combating the morbid disposition produced by eruptive fevers—a disposition which is itself very variable, according to the peculiarities of different epidemics. However, in remarking that the majority of phagedenic cases succeeding eruptive fevers are chiefly observed in hospitals or among the indigent population, we cannot help believing that the combination of many deleterious causes produce the same effect. On this account, the general treatment ought above all to be associated with a proper hygiene. We had occasion, at the time of the

* In the treatment of severe cases of non-syphilitic rupia and of cachectic ecthyma we place great reliance on the ol. terebinthina, which may be given in combination with quinine, iron, or any other tonics suitable to the case. The crusts should be removed by means of poultices, and the ulcerated surfaces dressed with the ung. hyd. nit. oxyd.—Ed.

cholera in 1849, to observe how overcrowding may induce this terrible complication of eruptive fevers. The Pascal Asylum was then devoted to the reception of young orphans whose parents were the victims of cholera; but its dimensions were very limited, and when in May and June the scourge extended its terrible ravages, the young population increased so much that in a few weeks a considerable number of them had to be sent to the Hospital for Children suffering from acute (black) gangrene of the mouth, or from phagedenic buccal and vulvar gangrene, which had succeeded measles of moderate intensity, and, what is remarkable, had also in some cases appeared spontaneously without any previous eruptive fever. These facts demonstrate, for many reasons, the importance of hygienic rules and of general treatment. The latter must necessarily vary according to the nature of the cachexia, its cause, and the age and condition of the patient, &c. The treatment by chlorate of potass, introduced from abroad, has recently been tried in Paris. Among the first, our learned teacher, Dr. BLACHE, afterwards MM. BARTHEZ, BERGERON, and others, have demonstrated the success of this remedy in pseudo-membranous stomatitis. The internal administration of chlorate of potass appears to exercise a specific action upon the buccal mucous membrane: after the lapse of a very short time it assumes a rosy colour, the tumefaction disappears, and the ulcers cicatrize. Will these marvellous facts in regard to mild buccal affections, which may assume a grave aspect, but are generally of short duration, apply equally to buccal or vulvar asthenic phagedenic gangrene? We cannot tell, having no data to decide upon; but we have our doubts, which may be explained by the formal contradiction existing between observers of great merit in regard to the curative virtue of chlorate of potass. Some assert that its power is constant: others not merely deny this, but do not attribute to it any appreciable action.

Have the latter observed cases of phagedenic gangrene, the progress and aspect of which may so much resemble at certain times ulcero-membranous, pseudo-membranous, or diphtheritic stomatitis? The local treatment is always a great adjuvant, especially when we are enabled to influence the constitution favourably. It chiefly consists in energetic cauterizations, either with the actual cautery, or with hydrochloric acid when the parts only admit of the application of the potential cautery. It is by such severe means that we are sometimes enabled to arrest the progress of gangrene in the mouth.

We must have recourse to caustics so long as the extension of the margins is evident. If the vitality of the children is not too much diminished, the complete destruction of the superficial layer of molecular gangrene is the only means of arresting its progress. It is scarcely necessary to say that detergent lotions or stimulating dressings tend to favour the conversion of these sanious ulcers into healthy sores.

D.—Treatment of Ultimate Diphtheria.—The nature and period at which this cachectic lesion occurs, furnish the physician with indications arising out of the epidemics themselves, and also from the particular cases in which the diphtheritic element makes its appearance.

NINTH CLASS.—INFLAMMATORY DISEASES.

This group comprises a considerable number of cutaneous affections which have a certain number of characters in common. All the diseases contained in this group excite more or less general symptoms, some of them in the manner of eruptive fevers, specific contagions. (Variola, scarlatina, &c.)

Nearly all of them may be under the influence of a peculiar state of the digestive organs.

None of them are of a contagious character.

They often appear to be allied to certain peculiar states of the constitution, and all of them may occur several times in the same individual. They do not possess the important clinical advantage of destroying in the economy, by their first appearance, the aptitude of being again developed, which is one of the chief characters of specific contagious eruptive fevers, and is erroneously ascribed to the greater part of the inflammatory diseases which constitute our ninth class.

SECTION I.—ACUTE ECTHYMA.

Ecthyma is a non-contagious affection characterised by large prominent pustules, usually few in number, the base of which is hard and of a red colour. These pustules have been selected by WILLAN as the type of *phlysacious* pustules.

They are nearly always discrete and appear successively. When they have arrived at their period of dessication they are covered with brown, thick adherent crusts, which, after their fall, leave reddish marks, with a slight cicatrix on the skin.

M. RAYER has shown* that on carefully examining the structure of the pustules of ecthyma at their different periods we recognise: 1. That in the first stage (red elevations) there is merely a sanguineous injection with a pyriform tumefaction of the dermis; 2. That in the second there is deposited upon the summit of these elevations, rarely upon the whole surface, and under the epidermis, a certain quantity of purulent serum; 3. That in the third, which supervenes soon after, there is deposited a quasi pseudo-membranous substance in the centre of the elevation which is evidently *perforated*; 4. That after the escape of this matter and the removal of the epidermis, the pustule appears in the form of a small cup-shaped cavity surrounded by a hard and thick edge; 5. On the following days this thickened margin subsides, at the same time a slight cicatrix is formed beneath the crust, the centre of which is fixed within the point where the perforation was observed.

At other times the pustules of ecthyma occupy, on the contrary, the whole patch. The red peripheric areola is scarcely marked. They resemble bullæ filled with pus.

Finally, the pustules terminate by resolution, when the crusts are replaced by squamæ more or less abundant.

Acute ecthyma, the duration of which is about twelve days, is generally accompanied or preceded by general symptoms.

These are usually in direct proportion to the intensity of the eruption. These symptoms are very variable: they may sometimes, by their number and the reaction which they excite, resemble the prodromata of eruptive fevers: uneasi-

* *Traité de la Maladies de la Peau*. Second edition. T. I, p. 725. Paris, 1835.

ness, loss of appetite, headache, feverishness, and shivering. But generally these phenomena are less intense, so that they may pass unnoticed.

On the contrary, the local symptoms furnished by the parts of the body where the eruption is about to appear are nearly constant. They consist of a burning sensation in the skin, or of a fixed intense pain resembling that of shingles.

This particular eruption may show itself upon all parts of the body; but it is chiefly observed on the neck, the extremities, and the chest. It only appears very rarely in this acute form in the child, and even then it is only met with in the course of the second and third periods of infancy. In proportion as the cachectic form is frequent in the course of infantile cachexias, so, on the contrary, is the acute form of ecthyma rare under ordinary conditions of health.

The diagnosis of this form never offers any difficulties: the size and the isolation of the pustules are sufficient to separate them from those of impetigo, which are small, flattened, superficial, more or less confluent, with characteristic soft, yellowish crusts.

The prognosis is favourable, in which it differs much from cachectic ecthyma, which is frequently met with, whilst the acute and mild forms very seldom occur.

SECTION II.—SIMPLE PEMPHIGUS.

We have seen that there exists a form of pemphigus to which modern authors, for the most part, have given the epithet of syphilitic, and which does not appear to us to be a certain sign of syphilis, but a cachectic symptom, which, as our colleague, DESRUELLES, in his inaugural thesis, observes, should only be considered as presumptive of a specific infection. There exists another form of pemphigus, less rarely met with, which, contrary to the former, may

appear in the new-born and in children of all ages who are in a perfectly healthy condition.

The eruption of simple pemphigus is usually preceded by more or less intense general symptoms, which may resemble those which precede or accompany contagious eruptive fevers properly so termed. Among the precursory symptoms rarely absent is constipation. However, the general symptoms may be totally absent, and in the new-born they frequently pass unperceived. When well marked their duration rarely exceeds two or three days.

The bullous eruption called pemphigus, is composed of a series of distinct phases which have been successively studied according to the mode of their appearance. Thus each bulla is composed of rubefaction, tumefaction, and vesication, terminating by a crust. These three phases may respectively be of very variable duration. Some of them may escape observation, but nevertheless they exist. Rubefaction is the first local symptom preceding the development of the bulla. It is formed by a red, round patch, the dimension of which may attain the size of the hand, but generally it does not exceed the dimensions of a two-franc piece. This colour becomes of a deeper red as the moment of vesication approaches, and continues during the whole duration of the bulla; for, appearing before its development, it forms an areola around it, as well as around the excoriations which follow it. Finally the rubefaction persists for a longer or shorter time after the cicatrization.

The tumefaction is a phenomenon produced at the same time as the rubefaction, and is, like it, limited. The skin is tense, and sometimes the subjacent cellular tissue participates in this œdematous congestion, which, however, never proceeds so far as to permit the pressure of the finger to produce a well-marked depression. This tumefaction does not persist long. It disappears in proportion as the bulla

is developed, but not completely so until the period of dessication. At a certain time there appears upon these red, tumefied patches the first degree of vesication, when the epidermis is raised by a small quantity of liquid. This augments rapidly, and the pemphigoid bulla is formed. The volume of these bullæ may vary from the size of a small hazelnut to that of an egg. They have the aspect of a large blister, are usually semi-spherical, and more or less prominent according to their development. The liquid contained in this epidermic pellicle is, at the commencement, clear; but it soon becomes turbid and milky, having sometimes a greenish tint. The chemical composition has been given by BRAUN, who found in 100 parts of serum 93.013 of water, 5.417 of albumen, and 1.070 of chloride of sodium. It will be perceived that this composition is singularly like that of the serum obtained by vesication.

The bullæ may present different aspects. Thus, the erythematous areola is sometimes very distinct and surrounds them completely; at other times, on the contrary, the circular red stripe is absent, the vesicle being too largely developed and having extended beyond the extreme limits of the erythematous patch. These bullæ are more or less tense and smooth, according to their period of increase or decline, and in proportion as they are full or half filled. They break or are dessicated by a kind of reabsorption of the liquid, a portion of which is coagulated and organised, while the rest is either reabsorbed or evaporates through the epidermic membrane.

When the rupture is effected spontaneously or by some accident, the liquid escapes, leaving a more or less denuded surface, when two things may occur. The epidermis, after the rupture, may protect the denuded dermis from the contact of the air and external bodies. A new epidermic secretion will then be produced under this protection, and

the healing proceeds rapidly. But it may also happen that notwithstanding the rupture of the bulla, the secretion constituting it continuing, the albuminous serum becomes concrete, and mixing with the detritus of the ruptured epidermis, forms a crust more or less voluminous and persistent, which, when it falls naturally, leaves beneath it a deep red mark which lasts for several weeks.

This eruption, considered in general, is very variable in intensity. It may be constituted by the existence of a single bulla; on the other hand there are instances cited in which the whole surface of the body was covered with them.

Its duration varies much according as the bullæ appear successively or simultaneously. But in general, whatever may be the total duration of the eruption, that of each individual bulla is generally about seven or eight days. The average duration of the whole eruption is, according to most authors, from one to four weeks.

As the affection may appear upon any part of the body, we have some remarks to offer on this subject. The authors who have insisted upon the syphilitic nature of pemphigus in new-born children, have pointed out the frequency of its occurrence upon the palms and plantar surfaces; while, on the contrary, in simple, non-cachectic pemphigus the hands and the feet are rarely the seat of the development of bullæ. In the simple variety, they have been observed around the mucous membranes, even upon the internal surface of the cheeks, the tongue, and the nasal fossæ.

The local symptoms are inconsiderable; nevertheless the rupture of the bullæ causes much pain if the denuded dermis is exposed to friction. Excepting under these circumstances the young patients do not appear to be much incommoded unless it be by the itching, which is sometimes persistent at the time of dessication.

The etiology of simple pemphigus is very obscure; hence,

as in other diseases of the same kind, we find a considerable number of causes enumerated. We shall confine ourselves to point out a fact confirmed by observation without pretending to attach to it the idea of a direct cause. It is this, that cases of acute pemphigus seem chiefly to prevail in the heat of the summer, while the cachectic form seems to be more under the influence of a cold temperature. Professor TROUSSEAU has related a curious case of pemphigus, which appeared only to be a pathological variety of varicella. This skilful practitioner believes that the transformation was owing to an epidemic influence. "The transformation of varicella into pemphigus is by no means rare, and always constitutes a serious accident. During the appearance of epidemic varicella in the Hospital Necker, in 1855, there was seen, among other remarkable facts, a child in whom this transformation took place, and upon the body of which a bulla of pemphigus covered nearly half the trunk, extending from the inferior extremity of the sternum to the umbilicus, which, on breaking, gave rise to a truly formidable sore. It was absolutely impossible to assign any cause for its reappearance."

We find in the excellent treatise of Dr. FEVRE on pemphigus, from which we borrow these details, mention made of malignant epidemics of this affection. HEUFLAND, WHITELEY, and OZANAM, have also mentioned several epidemics of this kind. It is probably on account of these epidemics that contagion has been suspected; but the inoculations performed by HALL, RAYER, NUSSON, &c., have demonstrated the non-contagious nature of pemphigus. GILBERT, from the general symptoms which usually accompany this disease, has thought proper to connect it with the functional derangement of the digestive organs, so that according to this author the gastrointestinal inflammation forms to a considerable extent an integral part of the cutaneous affection.

Among the cutaneous lesions which may more or less resemble pemphigus we shall only allude to zona. However, in this latter affection, the vesicles are much smaller and are always collected in groups upon an erythematous surface, while the bullæ of pemphigus are nearly agglomerated; and though some of them should give rise to doubts there are always others presenting decided and distinctive characters. The bullæ, which complicate erysipelas (bullous), may perfectly resemble those of pemphigus, but then they rest upon the erysipelas itself, so that no error is possible.

The prognosis, contrary to that in the cachectic form is always favourable.

SECTION III.—HERPES.

Under this name we comprise a species of cutaneous lesion characterised by vesicles appearing in groups, resting upon an erythematous base, separated from each other, the appearance and dessication of which is affected within a week or a fortnight. Diseases have been ranged under this denomination which evidently belong to parasitic affections (See *Parasitic Diseases*), and, formerly, herpes was considered to be synonymous with *tetters*. Being now better known through the labours of WILLAN, BATEMAN, and modern dermatologists, it has a clearly defined signification. We shall only describe the two principal forms of herpes: 1. Phlyctenoid herpes, with its various seats; 2. Herpes, zoster, or zona.

I.—HERPES PHLYCTENOIDES.

Phlyctenoid herpes is always an acute affection characterised by groups of transparent, globular vesicles. Their volume has sometimes been compared to that of millet-seeds, sometimes to that of peas. They generally appear, more or less considerable in numbers, resting upon a red, inflamed surface, which usually has a circular form. These vesicular

groups may be scattered here and there upon the surface of the body; they are, however, chiefly observed on the superior parts, such as the forehead and the neck. M. CAZENAVE has remarked that upon the extremities they are usually found in the vicinity of the articulations.

Herpes is nearly always accompanied by general symptoms more or less marked. These usually consist of a feeling of indisposition, accompanied by a short fever. It is often preceded by a neuralgia of the skin in the spots more or less close to the place of eruption. Dr. TARDIEU has justly insisted upon this little-known peculiarity.*

The local symptoms are formications, heat, and itching, which precede the formation of small red spots so grouped as to form a surface varying from the dimensions of a franc piece to the size of the hand. An hour afterwards the vesicles are formed, with their tense, globular, characteristic aspect. The liquid they contain is, during the first few hours, limpid; it, however, soon becomes turbid, opaque, purulent, and finally of a sanguinolent appearance. After a duration of about four or seven days, the vesicles break and subside, crusts are formed, which fall off towards the tenth or fourteenth day, leaving behind a livid red colour, more or less persistent.

Phlyctenoid herpes can only be confounded with pemphigus and eczema. The very epithet, phlyctenoid, tends to connect this affection with pemphigus, from which it presents considerable differences, although ALIBERT has called them by the same name. M. RAYER† has justly observed that the old denomination, herpes *miliaris*, as indicating the volume of the vesicles, would certainly have been preferable. However this may be, when the bullæ of pemphigus are very small and are compared with the large vesicles of herpes,

* *Manuel de Pathologie et de Clinique Médicales.*

† *Traité des Maladies de la Peau.* Second edition. Paris, 1835.

some resemblance may exist: but the bullæ of pemphigus rarely present themselves in groups. There might, however, be serious difficulties when these two lesions exist simultaneously in the same patient.

The diagnosis of eczema cannot offer any serious difficulties in respect to herpes on account of the smallness of its vesicles.

A disease is, in England, described under the name *Nirles*, which seems to be phlyctenoid herpes complicated with distinct vesicles covering erythematous patches. The duration of herpes is usually very variable, rarely however exceeding two or three weeks. Its prolongation often depends upon the successive appearance of fresh vesicular groups. In the latter case the disease has lasted for months.

The prognosis of this affection is favourable. It is only met with in children towards the end of the second and during the third period of infancy. Its appearance in new-born children is exceptional; in fact, the disease is comparatively rare in infancy, and is much oftener observed in the adult and in aged persons. Its causes are unknown, and its development is sometimes connected with acute diseases in the course of which it appears. But this coincidence is far from being as frequent as it is in the following variety.

Herpes labialis has peculiarities of appearance and seat which deserve special mention. It appears in the form of vesicles, forming an irregular group on the surface of the lips, which may extend to the chin, the cheek, and the alæ of the nose. These vesicles are like those of the previous variety, preceded by a local sensation of intense heat, the skin reddens, becomes tumefied and painful to the touch several hours before their development, which is very rapidly completed.

The liquid of these vesicles is at first transparent, then turbid and purulent, and four or five days after the appear-

ance of the eruption the vesicles break or are desiccated, and transformed into blackish crusts, which usually fall off between the seventh and the twelfth day. It has been remarked that when the crusts are removed before they are completely dry, new ones are formed, which are a longer time in being detached spontaneously. Sometimes the vesicles of herpes occasion a very considerable swelling of the lips; but in the generality of cases the tumefaction, though marked, scarcely produces any inconvenience. Herpes of the lips has been considered a favourable symptom in fevers, where it has been represented as indicative of a rapid termination. The eruption is always unimportant. It shows itself almost constantly in certain phlegmasiæ, according to the medical constitutions. There is one infantile affection in which it is rarely absent, as Professor TROUSSEAU remarks, namely, in uncomplicated pneumonia, which runs through its periods rapidly and with such constant benignity. On the contrary, herpes is rarely met with in the catarrhal form. It frequently accompanies the access of fever, intermittent or otherwise: it has also been said that it appears in the course of coryza and stomatitis. But we should in this respect distinguish whether it be not rather the herpetic vesicles which excite the affections which they are supposed to accompany. Thus Dr. GUBLER has lately shown that herpetic vesicles making their appearance in the pharynx produce what he calls *herpetiform angina*. This talented author had already in a previous work insisted upon the law of analogy governing the affections of internal and external integuments.

Herpes preputialis is formed by one or several groups of globular vesicles which appear upon one of the surfaces of the prepuce. Both surfaces are sometimes simultaneously affected by these vesicles.

The commencement is the same as in the preceding variety, namely, by red pruriginous spots, sometimes pre-

ceeded by dermalgia of the scrotum. Towards the second day vesicles appear, filled with a transparent liquid which soon becomes turbid and purulent. When the vesicles occupy the internal surface of the prepuce, they soon break, and as the epithelium offers but little resistance, superficial ulcers result, which it is important to distinguish in the adult from syphilitic chancres. Doubts of this kind are, of course, exceptional in infancy.

This affection, which is common among boys possessing a fine and delicate skin, offers no gravity whatever, it disappears more rapidly when left alone than by any intervention for the purpose of removing the crusts.

Herpes Vulvaris.—Herpetetic vesicles appear upon the labia majora and minora of little girls, exactly resembling those on the prepuce of boys. The characters are exactly the same. But it has occurred occasionally that the vesicles appear upon the mucous membranes of the genitals, and that superficial ulcers are very rapidly formed. And as we have witnessed, an error of diagnosis, easily committed at the commencement, may lead us to believe in the existence of vulvar gangrene. It is very true that, at the outset, there may exist a great resemblance between the ulcerated vesicles of herpes and the commencement of phagedenic gangrene. But the general condition in which the latter appears furnishes sufficiently distinctive characters, even before the ulcers have assumed their phagedenic, asthenic, or gangrenous aspect.

The herpetetic vesicles of the vulva in young girls are frequently taken for syphilitic ulcers. It may easily be conceived what importance attaches to these cases in medical jurisprudence in regard to criminal assaults. MM. HUGUIER* and LEGENDRE† have in their treatises, with great sagacity

* "Mémoire sur les Appareils Sécréteurs Externes de la Femme."—(*Mémoires de l'Académie de Médecine*. Paris, 1850. T. xv.)

† *Archives Générales de Médecine*. Paris, 1853.

and talent, traced very clearly the distinctive characters of the ulcers produced in the vulva by herpes, follicular inflammation of the vulva, and of those which are of a syphilitic nature. They may resemble each other by their round form, their greyish base, and their cleanly-cut borders. But the multiplicity and the disposition in regular groups of herpetic and follicular ulcers suffices to characterise them. They are, moreover, as well as syphilitic ulcers, very different from the erosions which most frequently cause inflammation of the vulva caused by local irritation and direct violence in criminal assaults. These facts have been particularly elucidated by TARDIEU in his remarkable treatise entitled, *Etude Médico-legale sur les Attentat aux Meurs*.*

All these herpetic vesicles, which appear more or less connected with general constitutional disturbance, or even with phlegmasiæ or rheumatic pyrexia, &c., show themselves only at a certain period of infancy. Unknown among the newborn, they are frequent in the course of the second and third period of infancy. Children with a fine and delicate skin appear more subject to it than others, but the medical constitutions singularly influence the appearance of herpes, especially that of the lips, for there are epochs when we may nearly with certainty assume the existence of idiopathic pneumonia in a child seized by a violent fever and presenting an eruption of *herpes labialis*.

II.—ZONA.

Zona is a vesicular affection, the chief characters of which are that it has a peculiar tendency to appear in circles, and that it is, more than any other form of herpes, under the influence of a neuralgic affection. This singular affection may be developed upon any part, but it generally occupies the trunk. It is constituted by groups of vesicles

* *Annales d'hygiène et de Médecine Légale*. Paris, 1858. T. viii, ix.

at some distance from each other; but, nevertheless, so arranged as to describe a sort of semicircular belt around the trunk. Zona is most frequently preceded or accompanied by general symptoms, which are sometimes rather severe, such as shivering and fever, but most frequently it merely induces a feeling of indisposition and nausea. It may also occur that no initial phenomena announces the eruption, which is then altogether a local disease. It commences by red spots at the extremities of the belt, after which new spots appear in the intermediate space to complete this semi-girdle. The patches are successively covered with white transparent vesicles, which have been compared to small pearls. Their maximum size, which equals that of a pea, is usually attained within four or five days, after which the colourless liquid becomes turbid and purulent. The broken vesicles leave the dermis exposed, and it suppurates. Those, on the contrary, which resist friction, and do not break spontaneously, become dessicated and transformed into yellowish crusts. The latter in their turn detach themselves from the cutaneous surface leaving behind small red patches. The progress of these vesicles is not simultaneous; their periods of commencement and dessication seem to succeed each other. While a new group arises the preceding one is sometimes in process of cure. Dr. JULES PARROT has published an excellent monograph on zona, in which he has demonstrated better than his predecessors the great part which pain plays in zona. From the cases of others as well as his own he has proved that the violent pain which mostly accompanies this eruption was, in fact, neuralgia, as had, indeed, been surmised before him; but he proceeded further; he furnished proofs drawn from anatomy. Thus he observes:

“MM. BASSEREAU and VALLEIX, who have so carefully studied painful affections of the nerves, affirm the *neuralgic* nature of the pain attending zona in some cases, and ques-

tion it in others. I shall in the first place establish a fact, which too clearly results from what precedes to be in any way contested, which is, that pain plays the predominating part in the morbid phenomena of zona. It precedes the eruption, it accompanies their acme, and frequently persists long after the vesicles have disappeared. In many cases it absorbs all the attention of the patients, who care little about the eruption, but cry for help against the intolerable lancinating pains which torment them night and day.

"Let us see what relations exist between the pain and the eruption properly so-called; this is an important point which will throw some light on several obscure facts. The eruption as well as the pain is developed on the track of a nervous branch, most frequently superficial, and which is of the number of those in which neuralgia usually shows itself. Among the nerves most frequently affected I may cite: the intercostals, the anterior lumbar branches, the tri-facial, the sciatic, the crural, the ramifications of the superficial cervical plexus. The books are full of cases of zona developed in the direction of these nervous cords, and I have related some of them in this work."*

The causes of zona are, according to most authors, very obscure. M. JULES PARROT connects the production of this cutaneous lesion with the action of cold and also with dyspepsia. Certain it is that zona is much more frequent among adults than among infants. The latter, as is well known, are rarely dyspeptic, while their age exempts them, to a certain extent, from exposure to the extremes of temperature. The diagnosis of this affection offers no difficulty, phlyctenoid herpes presents some resemblance, but that attacks simultaneously several regions of the body, and rarely, if ever, exhibits the characteristic regularity of this disease—that is to say, the semi-zone. Erysipelas may also offer some

* *Considerations sur la Zone*, p. 15. Paris, 1857.

resemblance to it by the general phenomena which signalise its appearance, but the local state removes all doubt.

The prognosis of zona is never serious even in young children who are really subject to it. It is only towards the end of the second and during the third period of infancy that the disease presents characters analogous to those seen in the adult.

SECTION IV.—ERYTHEMA.

By the expression erythema we understand in dermatology some very distinct and, we may add, very dissimilar diseases.

Thus the principal authors define erythema as follows: A non-contagious exanthem with or without fever, characterised by one or several red patches, from a few lines to several inches in diameter, scattered upon one or several regions of the body, and the most common duration of which, in the acute stage, is from one to two weeks.

Erythema comprises seven principal varieties, established according to the external characters of the eruption.

We consider that in erythema, and many other skin diseases, the cutaneous lesion alone should not regulate the whole division. In such cases it frequently results that perfectly dissimilar phenomena are connected together.

We distinguish, therefore, in regard to the affection which engages our attention, two very distinct classes; one comprising febrile exanthematous eruptions, the general symptoms of which constitute, in some sort, the whole disease; and the other formed by that red erythematous colour of the external integument which succeeds the most different and numerous local physical causes.

A.—The first division comprises all the varieties of febrile erythemata, such as *erythema papulatum*, *erythema tuberculatum*, *erythema nodosum*, *erythema marginatum*, and *erythema fugax*. All these varieties possess the common character

that they appear with general symptoms sometimes so marked that they may be compared to eruptive fevers properly so-called. These symptoms mostly consist of uneasiness, prostration, anorexia, pains in the limbs, and a feverishness more or less intense. When these general symptoms are very violent and acute in young subjects they cease or diminish notably when the erythematous eruption appears. All these varieties of erythema are analogous in aspect. They manifest themselves chiefly upon the upper and lower extremities, often in the form of small, red, papular, irregularly rounded patches, scarcely exceeding the dimension of a centime (*papulatum*). Sometimes small prominent tumours are added to these papulæ, which disappear in about a week or ten days (*tuberculatum*). In other cases these tumours or nodosities manifest themselves alone in the form of red, oval patches, prominent in the centre and painful to the touch, offering generally the peculiarity of presenting an oval form, the great diameter of which is parallel to the trunk (*nodosum*). Again; these patches may present a circular arrangement of about half an inch in diameter, with a prominent papular circumference (*marginatum*); or the erythema may form complete rings, the centre of which is healthy (*circinatum*). There exists a red elevation, as if the elements of the dermis had been thickened. I have now under my care a young woman who frequently presents a unique ring, perfectly defined, at each fleshy projection on the palmar surface of the hand corresponding with the little finger. Finally, this affection may be constituted of red, largely-diffused patches, without any appreciable swelling of the skin, which is dry and burning on its surface.

All these modes in which erythema appears, present shades which may respectively become considerable. Nearly all of them possess the important character of disappearing under the pressure of the finger, reappearing immediately

after the pressure ceases. They all present very different colours, according to their period of development. More or less red at the commencement, they assume towards their decline a bluish ecchymotic tint, and mostly disappear in about twelve days.

Nearly all these erythematous varieties are sometimes coincident with an inflammatory rheumatic affection. We thus frequently meet with them in the course of acute articular rheumatism, more or less extensive. Hence old authors have termed certain varieties of erythema, cutaneous rheumatism. It is very true that in these kinds of exanthems the blood is generally buffy, and that they appear frequently in young and vigorous subjects who have already exhibited rheumatic manifestations.

B.—The second class of erythema contains varieties which are mostly apyretic, generally depending upon physical causes, such as a prolonged contact with soiled linen, continuous pressure upon any part of the body, violent friction, &c. The contact of the skin with itself in the folds of the neck, the wrists, the thighs, produces a species of erythema called *intertrigo*. Other causes may provoke the appearance of erythemata more or less generalised, as, for instance, the injection of certain medicaments, as opium, belladonna, &c. Finally erythema, in as much as it involves a red colour of the skin, is a phenomenon which is present in most cutaneous affections, whether it appears at the circumference of pustules or of vesicles.

We have seen what an important part it plays as the starting-point of phagedenic gangrene.

The consideration of age is very important in regard to all these varieties of erythema. The first class is, in fact, only met with in the second and third period of infancy at the approach of puberty, while the erythema resulting from physical causes is very frequent among new-born children.

SECTION V.—ROSEOLA.

The existence of roseola is not universally admitted, as its chief characters appear to scientific authorities to be borrowed from many affections. It is at least very probable that cases have been described as roseola, which were erythema and measles, without any concomitant catarrh. There are, on the other hand, pathologists who accept roseola as a distinct species of eruptive fever, having its place between measles and scarlatina.

Far from being inclined to range roseola beside measles and scarlatina, we are rather disposed to place it (as far as it deserves a separate description) near erythema and urticaria. Roseola, in fact, like most cutaneous affections which we term inflammatory, has nothing contagious and specific, characters which are essential to scarlatina and rubeola. The two latter diseases, in conjunction with variola, varioloid, and varicella, form a very homogeneous nosological group, evidently far removed from roseola. The cutaneous lesion alone presents a more or less perfect resemblance to that of measles; and yet how great the separation between them in regard to their characters and sequelæ. Everything concurs to connect roseola with inflammatory erythematous affections. Like the latter it may attack the same individual several times, contrary to variola, scarlatina, and measles, which, once developed in the economy, generally destroy every ulterior disposition to contract them anew.

MM. CAZENAVE and SCHEDEL define this affection in the following terms: "Roseola is a non-contagious transient exanthem, characterised by rose-coloured patches of various forms, the appearance of which is generally preceded and accompanied by febrile symptoms." Numerous species of roseola have been established, which evidently do not merit a separate description allied as they are to different morbid

states. Thus there has been described *variolic* roseola because it had been formerly observed that in inoculated *variola* roseola appeared about one time in fifteen as a precursory sign. There has also been described a *vaccine* roseola (PEARSON), *miliary* roseola, *rheumatic* roseola, &c. All these varieties are related to the various forms of erythema.

Must we connect with the preceding varieties what Dr. SEE* has just pointed out to the attention of practitioners? This skilful observer found in a certain number of children after the operation of tracheotomy an eruption which presented the following character: "In the first group of patients there supervened the next morning, or the next morning but one, after the operation, red patches upon the whole surface of the body excepting the face, not accompanied by miliary vesicles, nor followed by desquamation. Some of these patients died before, others after, the cessation of the eruption. This eruption, which usually lasts two days, I shall term erythematous or scarlatiniform. In a second series of patients, who had undergone the same operation, the eruption was altogether analogous to that of scarlatina; the same red spots, the same desquamation, and in certain cases albuminuria and general dropsy. I shall qualify this eruption by the term scarlatinous.

Considering that these eruptions have no influence whatever upon the progress of croup, and that they differ from scarlatina in regard to the duration of the fever and the eruption, I have arrived at the conclusion that they must be classed apart from scarlatina. And what confirms me in this opinion is the mention made by HUXHAM of the transient eruptions supervening in pseudo-membranous angina, &c."

These explanations of Dr. SEE were received by the Society with some opposition, but the interest attached to the communication, and the scientific authority of this observer,

* *Société Médicale des Hôpitaux.* Séance du 9 Juin, 1858.

render his assertions worthy of being; on many accounts, carefully investigated.

There exists, nevertheless, especially in young subjects, and chiefly during the second period of infancy, a kind of roseola, to which alone this name can be properly applied, possessing the following characters: patches resembling those of measles, with intervals of sound skin, which may disappear after an existence of several hours. This affection may manifest itself upon a small portion of the body only, while sometimes it may occupy the whole cutaneous surface. After its disappearance, it sometimes reappears several times in succession. This variety, which resembles measles, and to which it seems that we ought to reserve the name of roseola, is accompanied by general symptoms peculiar to eruptive fevers; but it has not like these a fatal termination, and it constantly offers a favourable prognosis.

This eruption, like many others, also attacks the mucous membranes. We have seen in the course of roseola the buccal cavity and the conjunctivæ participate in the phenomena of injection with the rest of the cutaneous surface.

The causes of this affection are unknown. There are children who are subject to it several times, with the same characters and the same general symptoms. It sometimes assumes an epidemic character, but it has never appeared to exhibit the contagious character of specific eruptive fevers.

SECTION VI.—URTICARIA.

Urticaria is a cutaneous affection of short duration, characterised by prominent spots—sometimes paler, sometimes redder than the surrounding skin. It is to other exanthems, according to J. FRANK, what a prolonged ephemeral fever is to continued fever. Urticaria varies much in its course; being sometimes preceded or accompanied by very intense general symptoms, at other times it is perfectly apyretic.

Its two principal characters are the resemblance of the eruption to that resulting from the touch of the nettle, and the existence of a disagreeable, sometimes intolerable, itching. Six species of urticaria have been described, which, following the example of M. RAYER, we shall comprise in two principal groups, according as their progress is acute or chronic. In the former case the eruption may last a week or two, while in the chronic form it may last for months or even years. This chronic form is only the result of successive appearances of urticaria.

In the acute variety very serious general symptoms precede the eruption for a day or two, consisting of nausea, anxiety, headache, and fever. The eruption then appears in the form of more or less numerous patches, the colour of which varies, being either whiter or redder than the rest of the skin. These patches are prominent, surrounded by a red areola, very irregular in form, they are frequently close to each other, and form groups which coalesce. In other cases they are scattered here and there. They appear by preference upon the shoulders, the internal surface of the arms and thighs, and around the articulations. They are as variable in duration as they are in size and shape. Thus some disappear a minute or two after they first show themselves, others persist for hours without changing their character. The act of rubbing the skin usually causes a number of these patches to appear. After a time, not less than a week or two, the patches are no longer reproduced, and the patient recovers. This is also the case in urticaria, excited by the ingestion of certain aliments. It is well known that, according to individual predisposition, which is inexplicable, certain aliments have a tendency to determine an eruption of urticaria. Among the alimentary substances producing this effect have been enumerated: prawns, muscles, crabs, lobsters, the eggs of some fish, honey, bitter almonds, raspberries, strawberries, and

certain medicaments, such as valerian, &c. But if the eruption of acute urticaria resembles that provoked by the ingestion of particular aliments, we must add that frequently in the latter case there exists concurrently some disorder of digestion.

The general symptoms are almost absent in the chronic forms of urticaria. The patches appear at irregular hours, chiefly towards the night under the influence of the heat of the bed, when itching supervenes, accompanied by sleeplessness. It is generally believed that this chronic form is allied to a deranged state of the digestive organs.

The causes of these two forms of urticaria are, in persons predisposed to this eruption, the heats of summer, and yet it also occurs that the impression of cold produces a more or less abundant crop of these patches. In some patients the skin is so sensitive that a slight friction or a sudden change in the temperature are sufficient to produce the eruption.

The diagnosis of urticaria does not present any difficulty; its characters are sufficiently decisive to distinguish it from the different varieties of erythema and lichen, with which some authors have endeavoured to establish a comparison.

The prognosis of this affection is favourable, notwithstanding the long duration which the chronic form may assume. This affection is often met with in young persons and children with a fine and delicate skin. The acute form is the most common. It is generally only observed during the second or third period of infancy. In young subjects the eruption is sometimes preceded by symptoms so intense that the appearance of a specific, contagious eruptive fever, such as rubeola, scarlatina, &c., is expected.

SECTION VII.—ERYSIPELAS.

Erysipelas is a non-contagious, spreading inflammatory disease, characterised by a red colour of the skin, with swelling, which may terminate by ulceration or suppuration, and rarely by gangrene. It is well known how frequent and numerous the forms of erysipelas are. That of the new-born alone pertains to our subject. The fact is, that during the first days of existence, erysipelas is beyond question one of the most formidable of diseases. Professor TROUSSEAU has shown* the gravity and the principal characters of this severe affection, which he connects with the production of the wound of the umbilicus, consequent on the fall of the cord. We cannot do better than quote his own words: "The disease usually commences in the most simple and mild manner without any previous fever or general derangement. It is, at first, only a local and circumscribed inflammation of the skin without any apparent influence upon the rest of the economy. Nevertheless, the erysipelas having remained for a day or two on the spots first attacked suddenly assumes a more rapid course, and travels over the whole surface of the body, spreading step by step, like the motion of a sheet of water. Thus setting out from the pubes, it reaches the belly, the loins, the buttocks, and at the same time the thighs and legs. From the belly it ascends to the chest, invades the shoulders, descends again on one side under the arms, and ascends again to the face and the head. The more general it becomes the more does it appear to lose its inflammatory intensity, so that, if at the commencement the skin was tense, swelled, and of a cherry-red colour, it is at a later period scarcely tumefied, unless it be on the hands, the feet, and the eyelids; but the redness is invariably much diminished.

* *Journal de Médecine*; 1844.

"It sometimes happens that erysipelas, spreading from the pubes, descends only towards the inferior extremities, where it appears to exhaust its energy; we believe the disease to be at an end, when all on a sudden the trunk is attacked in its turn, and the inflammation gains the superior parts. But in proportion as the disease extends on one side it abandons the adjoining part, so that, for instance, when the chest is covered, the belly and the pubes are no longer affected. Hence it results that the arms and the legs may be red and tumefied at the same time. It then, at first sight, appears as if the erysipelas had multiplied; for if as most frequently happens the inflammation leaves no trace of its passage, not even desquamation or œdema, and if the infant is seen at the period above-mentioned, it might induce the belief that erysipelas had commenced simultaneously on the four extremities, which scarcely ever occurs.

"While during the first period the disease progresses step by step, such is no longer the case when it becomes general. It then reappears in the form of isolated spots spread over the whole surface of the body, which in their turn form the origin of a new erysipelas. A child can, therefore, not be considered as perfectly recovered unless all redness has for several days disappeared. We have said that there was scarcely any fever at the commencement, but when the cutaneous inflammation occupies a large space, the reaction is sometimes very great, being characterised by intense thirst, a frequent pulse, and a hot skin. At other times, and even in the gravest form, the child continues to suck, and scarcely exhibits any functional derangements excepting some restlessness and insomnia. The chief, perhaps the only character observed in all children, is the discolouration of the face, which sometimes supervenes very rapidly, and in other cases at a more advanced period. Subsequently, there is extreme restlessness, with incessant cries, insomnia, and in

some cases vomiting, diarrhoea, and, finally, convulsions; the pulse being generally frequent and very weak. On *post mortem* examination we generally find various lesions in the bronchial tubes, the lungs, or the intestines, according to the symptoms observed during life. Once we found a very serious peritonitis mentioned many times by UNDERWOOD, who described in children carried off by erysipelas, anatomical lesions similar to those found in women dying from puerperal fever." According to BARON, erysipelas is accompanied by peritonitis when it is fatal (CHOMEL and BLACHE). It has also been observed that erysipelas of new-born children is frequent during the course of epidemics of puerperal fevers.

Phagedenic gangrene occasionally complicates the erysipelas of new-born children as it does most infantile affections. The prognosis is nearly always grave in towns and hospitals. Of forty-five cases mentioned by different authors, thirty-one had a fatal termination. Erysipelas loses this gravity when it attacks children at a more advanced age, on whom the affection occurs with its ordinary form and character as observed in the adult. The face and the scalp are not so subject to its attacks in youth as at a more advanced age.

TREATMENT OF INFLAMMATORY DISEASES.

The treatment of these affections is to a certain extent uniform, consisting generally of demulcent beverages, laxatives, simple or bran baths, light and regular diet, rarely bleeding. Such are, in fact, the principal indications to be followed at the commencement and in the course of nearly every disease comprised in this group. The local treatment, however, does not admit of such a uniformity; we shall, therefore, indicate the local treatment adapted to each of them.

A.—*Treatment of Simple Pemphigus.*—The bullæ of pem-

phigus must be as much as possible protected from ruptures of the epidermis, to prevent the pain caused by the contact of the air with the dermis. This inconvenience may sometimes be obviated by slightly puncturing the distended bullæ, when a portion of the serum will escape without admitting the air. When ulcers succeed these ruptures they must be carefully dressed either with emollients or stimulants according to their appearance and their tendency to heal.

B.—Treatment of Herpes and Zona.—The vesicles of zona have been successively treated in different ways. TURNER advises their excision, SERRES their cauterization, in order to shorten the period of the eruption and to lessen the pain. M. RAYER, from whom we borrow these details, says, "I have tried this method: the first five cases yielded no favourable results; in all these patients the process was very painful, and it did not shorten the duration of the disease. I have since repeated and varied the procedure, and I find now, 1st, that if, after having opened or excised the vesicles, their interior be slightly touched with the nitrate of silver so as to produce a small very superficial crust, in the same way as is often done in aphthæ, the duration of zona is diminished; but it is on the contrary prolonged if the escharotic be too freely and carelessly applied. 2nd. That the vesicles, when properly cauterized, are more rarely followed by excoriations or by eschars, than if left to themselves, especially in elderly persons, and when they are situated upon the posterior part of the body. 3rd. That this system, which may be omitted in slight and distinct cases of herpes, should always be employed whenever there seems reason to apprehend excoriations or eschars in any of the groups on the body, face, &c. 4th. That in touching slightly the red patches preceding the eruption of the vesicles, and especially those which appear subsequently to the first crop, their development is

almost always arrested, without, however, any modification or abatement of the pain which accompanies them."

Three elements ought, according to Dr. J. PARROT, to engage the attention of the practitioner: 1st. The eruption; 2nd. The severe pain which frequently attends and follows it; 3rd. The affections of the digestive canal, which in certain cases produce the disease and sustain the neuralgia.

The treatment of the eruption is purely local; and, as CAZENAVE observes, the physician must content himself with protecting the herpetic vesicles from the contact of external agents, in order that they may regularly pass through the different periods of their evolution.

M. CAZENAVE causes the herpetic patches, previously moistened with oil of sweet almonds, to be sprinkled with starch.

Dr. HARDY uses the following mixture:

Starch	3 parts.
Oxyde of zinc	1 "

This application appears to act in an efficacious manner on the neuralgic condition.

I have frequently seen SANDRAS apply the plaster of VIGO to the vesicles with advantage: they seemed to reach their termination more rapidly, while a good number of them were completely arrested in their development.

When neuralgic pains continue after the eruption, the application of blisters is the best means of relieving them.

C.—Treatment of Erythema.—The treatment of the first division of erythema consists chiefly in the use of diluents, rest, appropriate diet, the employment of diaphoretics, and sometimes of mineral acids, aided by gentle laxatives. No local treatment is required. In the second class of cases the smarting and the uneasiness of the young patients must be soothed by frequent lotions of tepid water, which carry off the acrid secretions and prevent excoriation, which, when produced, is best treated by absorbent powders.

D.—Treatment of Roseola.—This slight affection scarcely requires any treatment, as in the majority of the diseases of this group the therapeutical indications are fulfilled in recommending a light diet, acidulated beverages, and sometimes gentle laxatives.

E.—Treatment of Urticaria.—The artificial exanthem produced by the stinging of nettles, very different from the febrile nettle-rash, does not generally require any treatment. If the stinging has been very severe, and the eruption cause irritation, sleeplessness, and other nervous symptoms, these may be allayed by topical applications, cold baths simple or acidulated, or by lotions of acetate of lead diluted with cold water (RAYER).

When acute urticaria is caused by the ingestion of any substance, either venomous of itself or rendered so by some peculiar idiosyncrasy, and neither vomiting nor alvine evacuations follow, they must be excited by means of tartar emetic or ipecacuanha. Some physicians prefer, when the symptoms are serious, the immediate employment of sulphate of zinc or sulphate of copper, on account of their very speedy effects.

When urticaria is independent of the ingestion of any poisonous substance, when it is associated with inflammation of any of the mucous membranes, or appears momentarily during the paroxysms of this latter affection, local bleeding from the epigastric region and verge of the anus, diluents, emollient glysters, the tepid bath, with decoction of mallow leaves or of lettuce leaves, and abstinence to a greater or less degree, fulfil a double indication in such cases, and often accomplish the cure of both complaints. In chronic urticaria inquiry must be made whether the eruption be not perhaps kept up by the habitual use of some liquid or some article of food which it would be important to discontinue (RAYER).

F.—Treatment of Erysipelas.—When erysipelas, as is mostly the case, presents itself in the form of a slight inflammation, and has, by its mildness and regular progress, an analogy to exanthematous eruptions, the treatment consists in the application of the following remedies: rest, lotions with fresh water, mucilaginous decoctions, as of althæa roots, mallow or elder leaves, gently anointing the part with lard, together with diluents internally, &c. These means suffice to cure the complaint, which, indeed, gets well almost as certainly if left to itself.

In severe cases, which are rare in childhood, excepting in new-born infants, numerous active medications have been equally lauded. In order to study them we must divide the treatment into local and general. The latter, under which we shall describe the principal modes of treatment, includes the *expectant method*, which has been very successful in cases of regular progress and moderate intensity.

The antiphlogistic method, recommended by BOUVILLAUD as a true specific in the treatment of erysipelas, is remarkably successful in adults; but it is doubtful whether it has ever been energetically employed in the infant. The evacuant system is applicable in certain medical constitutions, where this inflammation is accompanied by bilious symptoms.

The local treatment also comprises a large number of empirical and rational remedies, the principal of which are: mercurial ointments, considered by some physicians as very efficacious, but from which MM. BLACHE and CHOMEL have never derived the least advantage, and cauterization with nitrate of silver, either upon the erysipelas itself or upon the adjoining parts, to arrest its progress.

Professor VELPEAU recommends the following applications:

Protoxide of iron	30 grammes.
Water	1000 „

To be applied by means of compresses soaked in the solution.

Sulphate of iron	8 grammes.
Lard	32 „

To form an ointment. M. ROBERT LATOUR has proposed a thin layer of collodion to cover the inflamed part, which method has met with considerable success.

Flying blisters, applied upon the affected part in case the erysipelas extends considerably, or when it becomes ambulant, is, according to some authors, a means of fixing it to a certain spot. Other practitioners encircle the erysipelas by peripheric vesication in the hope that the inflammation will not transgress this barrier. Epispastics can only be employed in children approaching puberty. At an earlier age these agents are not easily supported, especially when they are of large extent.

It must have been observed that we have in this work not merely described those skin diseases which are peculiar to infancy, but we have also pointed out the special symptoms which childhood impresses upon affections common to it and adult age; or, in other words, we have endeavoured to describe the principal traits which concur to give a peculiar physiognomy to the cutaneous affections of infancy.

It was, in fact, much less important to give a long description of known diseases than to render conspicuous the *pathological dissimilarities* inherent in different ages, which constitute in some respect, as regards the child, a pathology apart in the great class of dermatoses.

The study of these modifications, according to the different periods of childhood, presents great interest, both as regards pathology and therapeutics.

Proceeding in this manner some general pathogenetic considerations naturally arise which are not without importance. Hence it was necessary for us to point out what

a great part the diatheses play as *causes* in the production of various skin diseases.

Observing these diseases from this point of view, it is equally evident that age produces the greatest modifications in the cutaneous affection according to the constitutional condition.

The proofs of these assertions can rarely be verified in hospital wards, on account of the instant removal of the little patients after the cure of the cutaneous affections. But in private practice the facts are easily ascertained, as the children are observed, amidst their brothers and sisters, from their birth up to puberty.

The parents themselves, by their former or actual state of health, yield additional elements, which are frequently very important to the physician. Under such conditions it frequently happens that we observe in the same child successive transformations of various skin diseases, developing themselves in a scrofulous subject from birth to puberty. Thus a new-born child, whose external appearance may remain satisfactory for some months, will, towards the end of lactation, present fluent aches; these, after successive more or less numerous cures, undergo a slight modification at every relapse, so that the patient, on arriving at the second period of infancy, may be attacked by any of the varieties of impetigo. These latter are more or less expressive of a scrofulous element, according to their form, or rather, according to their seat and the persistence of the impetiginous lesions. Scrofulous diseases will, moreover, in the second and third periods of infancy, manifest themselves by catarrhal inflammations of the mucous membranes, chronic, cutaneous, and subcutaneous abscesses, &c.

It is thus possible to see what may be called a series of cutaneous manifestations peculiar to scrofulous constitutions supervene during several years. This morbid, slow, and

regular evolution appears to follow the physiological progress influencing the individual development. In this pathological series the hierarchy does not appear to be infallible, but, nevertheless, in studying the filiation of these manifestations from this point of view, we are compelled to admit that there is in the mode of their appearance a certain degree of stability and regularity intimately allied to the evolutions of age.

We have nearly the same general observations to offer as regards tetter. The cutaneous diseases of the first period of infancy undergo, by age, transformations of another kind, but which also appear to receive their chief modifications under the influence of years.

During lactation aches appear in dartrous subjects with their proper characters; but, towards the second period of infancy, they are transformed into lichenoid or eczematous diseases, accompanied by itching, the intensity of which sometimes causes serious mischief in irritable children. In the second period of infancy, such patients are frequently afflicted by obstinate dartrous affections, such as psoriasis, several varieties of eczema, &c. At puberty, unless the state of health be considerably modified by this important period, dartrous diseases follow the phases usually observed in the adult.

We have chiefly insisted upon the cachexias frequently occurring in early life in order to show that they give peculiar characters to certain diseases of the skin.

From this clinical truth several very important facts result in infantile pathology. First, it appears very evident to us that certain cachectic cutaneous affections often simulate congenital syphilis, and we are glad to have drawn the attention of practitioners to it.

It is for this reason that we have considered more at length these phenomena—this *pseudo-syphilis* which attacks infants in the first months of their existence.

We have given a detailed description of phagedenic and gangrenous affections very little known, often confounded with diphtheritis, and upon which most of the classical treatises are completely silent.

There exists at an early age a disease which is not met with in the adult, even under the influence of identical causes. Phagedenic gangrene is, in fact, peculiar to infancy, in which it appears in known and determined states, so that it may be observed in its true physiognomy and peculiar progress. It undergoes, no doubt, some considerable modifications according to age; thus, during the first months of existence it simulates syphilis, but in the second period of infancy it is seen in its proper characters; it then sometimes has a rapid and acute progress, when it is called gangrene of the mouth, which it is, however, impossible to separate from phagedenic gangrene.

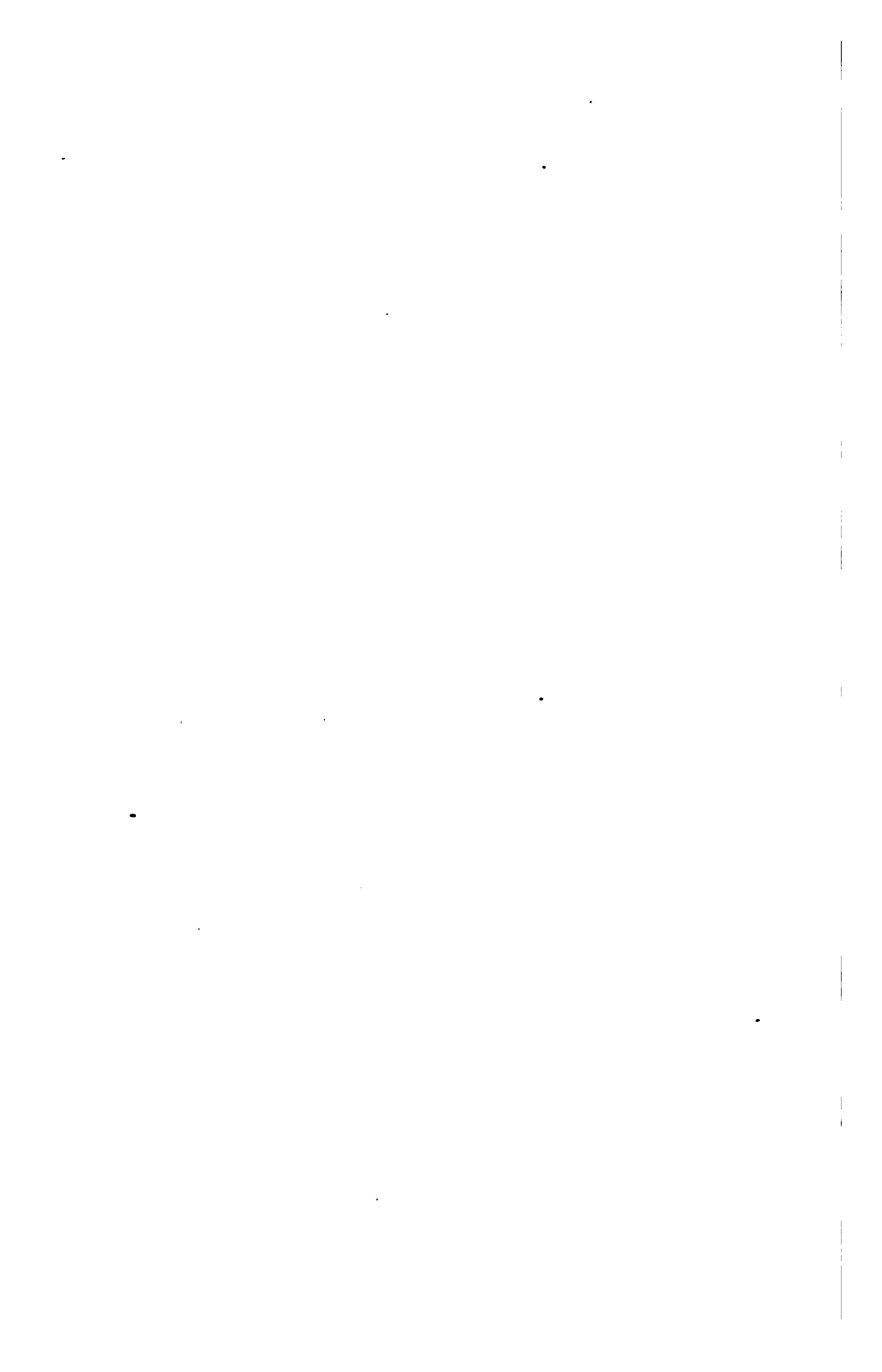
With regard to inflammatory cutaneous affections, we have on the contrary been very concise, as they will be found fully elaborated in several treatises on the diseases of the skin.

It is possible in a rapid summary to pass in review the principal cutaneous diseases appearing by preference at this or that period of infancy. Some of them appear at the same ages, and if there be a certain number which appear to belong indifferently to all periods, we can still in the apparent confusion recognise a regularity, if we do not allow ourselves to be guided by exceptional cases. Thus we mostly find in the first period of infancy, congenital syphilis, erythema, erysipelas, simple pemphigus, certain cachectic affections such as phagedenic gangrene, cachectic pemphigus, achores, and strophulous diseases.

In the second period, besides parasitic and inflammatory affections which may frequently occur, there are chiefly observed scrofulous and dartrous manifestations, such as impetigo and its varieties, cutaneous scrofula, lupus, lichen,

psoriasis, eczema, &c. In short, all cachectic diseases appear at this age to attain their maximum degree of frequency.

In the third period of infancy, on the contrary, parasitic and inflammatory diseases predominate, but the scrofulous and dartrous manifestations which commenced in the preceding period generally continue to show themselves. It is common to see these becoming extinct and disappearing about this age, but it is rare to observe for the *first time*, in the third period, scrofulous or dartrous affections which had not, in some way, manifested themselves in the earlier periods of life.



APPENDIX.

THE doses of the various medicinal agents contained in the following formulæ are intended for children of from two to four years of age. When these formulæ are made use of for children under the former of these ages, the doses of the more active medicines should be diminished to one-half or one-quarter of that prescribed, according to the age of the patient and the circumstances of the case. On the other hand, when the children are above the last-mentioned age, the doses should be gradually increased from the quantities contained in the formulæ, at the discretion of the practitioner, according to the effect produced.

IODINE AND ITS COMPOUNDS.

IODINE and its compounds are more generally useful in the treatment of various forms and stages of cutaneous diseases than any other articles of the *materia medica*; and it is of the greatest importance that the practitioner should acquire an accurate knowledge of their effects, and of the best mode of combining them with other remedies, according to the special results which they are intended to produce. They are employed both internally and externally; in the

latter mode they are used in the form of lotions, ointments, fumigations, embrocations, and baths.

Iodine is generally administered internally—in the cutaneous diseases of children—in the form of tincture of iodine, iodide of potassium, or iodide of ammonium. The doses and combinations in which it is administered must depend almost entirely on the nature and stage of the disease for which it is prescribed. For example: in the acute stage of certain cutaneous diseases accompanied by much fever, such as acute urticaria, eczema, erysipelas, &c., it should be given in combination with some saline, such as the tartrate or acetate of potash, or the potassio-tartrate of soda; it should also be prescribed in small doses, well diluted, and should be repeated frequently. See formulæ 1, 2, 3.

In infantile syphilis and the various forms of cutaneous and subcutaneous scrofula, before those diseases have become complicated with cachectic symptoms, it should be prescribed in larger doses, especially when ulceration is advancing rapidly; and a combination, in the first-mentioned disease, with the iodide of mercury, and, in the latter, with carbonate of ammonia, glycerine, or the bromides, which considerably increase its efficacy.

In syphilitic and scrofulous diseases it is best given in combination with iron or manganese.

When iodine is applied externally it acts in two ways: (1) locally; (2) by absorption. Iodine itself is much more powerful when used in this way than any of its compounds, and it is also much more readily and rapidly absorbed. But it is generally used in combination with iodide of potassium, for which various formulæ are given below.

When used in a more concentrated form, either as lotion or ointment, it has a powerful effect in modifying certain chronic affections of the skin; but it should only be used for this purpose in children when the disease is circum-

scribed, as the application is very painful. The same formulæ are also very useful in some forms of cutaneous scrofula, in the ulcerative stage. In the subcutaneous forms of scrofula the iodide of lead and the iodide of barium, in combination with iodide of potassium, or with each other, are frequently of much service.

Baths containing iodine or its combinations are of but little service, but the vapour of iodine, when used as a fumigation, is one of the most powerful means we possess of relieving the chronic and scaly forms of many tedious diseases of the skin to which children are liable. It may be used for this purpose either pure or in combination with sulphur; the latter mode of administration is generally preferred, but this method of using iodine is not applicable to very young children.

The administration of any of the preparations of iodine is very speedily followed, in some patients, by the appearance of certain eruptions in the skin, with the characters of which it is, for obvious reasons, extremely important that the practitioner should be well acquainted. These eruptions assume four different forms: (1) the erythematous, (2) the papular, (3) the vesicular, (4) the pustular.

Their appearance has no relation whatever either to the dose of the iodine or to the length of time during which it has been administered; they frequently follow the exhibition of very minute doses, and they appear to be connected with some peculiar idiosyncrasy on the part of the patient.

The erythematous form generally makes its appearance on the arms or legs, or on the front of the body. It occurs in the form of red patches of irregular shape, it is accompanied by a slight degree of fever, and it either soon disappears or passes into the papular form.

The papular form. This variety is sometimes diffused over the whole surface of the body, but more frequently

it is confined to the extremities. The papulæ are of a deep red colour, slightly elevated above the surface of the skin, and bearing a very strong resemblance to the papulæ of urticaria, with the exception of their colour. The larger papulæ are frequently surrounded by areolæ. This variety may either appear as the primary eruption, or it may follow the erythematous variety. It is more common than the last-mentioned form, but it does not occur by any means as frequently as the pustular form.

The vesicular form is the least frequently met with of all the forms of eruption produced by iodine. It generally follows the erythematous form, and it consists of small and irregular-shaped groups of acuminate vesicles, situated on an inflamed patch of skin, and it bears a close resemblance to eczema.

The pustular form of eruption is the most characteristic as well as the most frequent of all the eruptions caused by iodine. It is nothing more than a variety of acne. It most frequently appears on the head and on the upper half of the body, but it is often pretty generally scattered over the whole surface. It is sometimes developed over every part of the body almost simultaneously, but in other cases it occurs in successive crops. The eruption, when completely developed, presents the form of pustules of greater or less size, which are indurated at the base, and surrounded by inflamed areolæ. The induration sometimes becomes very great, and appears to involve the whole thickness of the skin; this sometimes becomes transformed into a boil, whilst occasionally suppuration occurs more rapidly and freely, and the induration is replaced by a small dermal abscess. This form of the disease is very painful.

As to the diagnosis of these eruptions—it must be remembered that they only occur in persons who are or have been recently taking iodine, and that they are generally

accompanied by frontal headache, coryza, and œdema of the eyelids. The pustular form, moreover, is frequently met with on the arms and legs, where we very seldom meet with true acne.

A.—For Internal Use.

1. *℞.* Potassii iodidi gr. iv.
Potassæ acetatis ʒss.
Aquæ ʒiv. M. ft. mist.
Capt. coch j larg. tertiâ
quâque horâ.

Use. Diuretic and antiphlogistic in febrile diseases of the skin, e. g., acute period of eczema, lichen, &c.

2. *℞.* Potassii iodidi gr. vi.
Sodæ potassio-tart. ʒj.
Aquæ ʒiv. M. ft. mist.
Capt. coch j larg. tertiâ
quâque horâ.

Use. Same as above, in urticaria, eczema, &c.

3. *℞.* Potassii iodidi gr. v.
Potassæ tartratis ʒj.
Tinct. aconiti gtt. iv.
Mist. amyg. ʒiv. M. ft. mist.

Capt. coch j larg. tertiâ
quâque horâ.

Use. Antiphlogistic and diuretic in the acute stage of any of the cutaneous diseases accompanied by severe fever and violent itching.

4. *℞.* Potassii iodidi gr. viii.
Ammon. sesquicarb. gr. xvi.

Infusi calumbæ
Aquæ aa ʒij. M. ft. mist.
Capt. coch ij parv. ter.
indies.

Use. In infantile syphilis in the early stage, and also in cutaneous scrofula.

5. *℞.* Potassii iodidi
Ammonii bromidi aa gr. x.
Aquæ ʒiv. M. ft. mist.
Capt. coch ij parv. ter.
indies.

Use. In infantile syphilis and scrofula.

6. *℞.* Ammonii iodidi gr. xvi.
Ammon. sesquicarb. gr. xvi.
Inf. calumbæ ʒiv. M. ft. mist.
Capt. coch ij parv. ter.
indies.

Use. The same as 4 and 5.

7. *℞.* Hydrarg. iodidi gr. iv.
Potassii iodidi gr. xvi.
Aquæ ʒiv. M. ft. mist.
Capt. coch ij parv. ter.
indies.

Use. In the more severe forms of infantile syphilis.

8. *℞.* Potassii iodidi gr. xvi.
Hydrarg. iodidi gr. iii.
Potassæ chloratis ʒij.
Aquæ ʒiv. M. ft. mist.
Capt. coch ij parv. ter.
indies.

Use. In infantile syphilitic affections of the skin and mucous membranes.

9. *℞.* Potassii iodidi gr. xvi.
Tinct. iodinei gtt. viii.
Aquæ ʒiv. M. ft. mist.
Capt. coch ij parv. ter.
indies.

Use. In cutaneous and sub-cutaneous scrofula, lupus, &c.

10. *℞. Potassii iodidi gr. xii.*
Ferri iodidi gr. viii.
Glycerinæ ꝑiv.
Aquæ ad ꝑiv. M. ft. mist.
Capt. coch ij parv. ter.
indies.

Use. Scrofulous and syphilitic diseases of the skin, with cachexia.

11. *℞. Ferri pyrophosp.*
Manganesii hypophosphitis aa gr. xvii.
Potassii iodidi gr. viii.
Aquæ ꝑiv. M. ft. mist.
Capt. coch ij parv. ter.
quotidie.

Use. Infantile cachexia, with cutaneous and mucous eruptions, whether of syphilitic origin or not.

12. *℞. Potassii iodidi gr. x.*
Ferri potassio-tart. ʒss.
Aquæ ꝑiv. M. ft. mist.
Capt. coch ij parv. ter.
indies.

Use. Infantile cachexia, scrofula—especially in the ulcerative form, pemphigus.

13. *℞. Potassii iodidi gr. xii.*
Ferri citratis ʒj.
Ammon. sesquicarb. gr. xii.
Glycerinæ ꝑiv.
Aquæ ad ꝑiv. M. ft. mist.
Capt. coch ij parv. ter.
indies.

Use. Rupia, pemphigus, ecthyma, phagedenic ulcers, scrofulous and syphilitic cachexia.

14. *℞. Ammonii iodidi gr. xx.*
Potassæ chloratis ʒss.
Ferri citratis gr. xvi.
Aquæ ꝑiv. M. ft. mist.
Capt. coch ij parv. ter.
indies.

Use. In syphilitic affections of the mouth and gums, stomatitis, ecthyma.

15. *℞. Potassii iodidi gr. xvi.*
Liq. arsenici chloridi gtt. xvi.
Aquæ ꝑiv. M. ft. mist.
Capt. coch ij parv. ter.
indies.

Use. In chronic scaly affections after the inflammatory period has passed, psoriasis, pityriasis, in the scaly stage of eczema.

16. *℞. Potassii iodidi gr. xvi.*
Sodæ biboratis ʒss.
Bismuthi carbonatis ʒss.
Glycerinæ ꝑiv.
Aquæ ad ꝑiv. M. ft. mist.
Capt. coch ij parv. ter.
indies.

Use. In syphilitic and cachectic cutaneous diseases, when complicated with diarrhoea.

17. *℞. Potassii iodidi*
Potassii bromidi aa gr. xii.
Ferri bromidi gr. viii.
Glycerinæ ꝑiv.
Aquæ ad ꝑiv. M. ft. mist.
Capt. coch ij parv. tertiâ
quâque horâ.

Use. In lupus and the inveterate forms of the scrofulous diseases of the skin and sub-cutaneous cellular tissue, scrofulous cachexia, pemphigus, and phagedenic affections.

B.—For External Application.

ointments.

- | | |
|---|--|
| <p>1. <i>R. Iodoform gr. iv.</i>
 <i>Cerat. cetacei 3j. M. ft.</i>
 <i>ung.</i>
 <i>Use.</i> In chronic scaly eruptions,
 psoriasis, pityriasis, scaly
 period of chronic eczema,
 cutaneous and subcutaneous
 scrofula.</p> <p>2. <i>R. Iodoform gr. iv.</i>
 <i>Plumbi iodidi gr. xii.</i>
 <i>Cerat. cetacei 3j. M. ft.</i>
 <i>ung.</i>
 <i>Use.</i> In scrofulous affections.</p> <p>3. <i>R. Potassii iodidi gr. viii.</i>
 <i>Cerat. cetacei 3j. M. ft.</i>
 <i>ung.</i>
 <i>Use.</i> In various diseases of
 the skin, when the period of
 inflammation has subsided—
 scabies, scrofulous diseases,
 ecthyma.</p> <p>4. <i>R. Potassii iodidi ʒj.</i>
 <i>Cerat. cetacei 3j. M. ft.</i>
 <i>ung.</i>
 <i>Use.</i> In the more rebellious
 and chronic forms of scaly
 and pustular disease, scabies,
 rupia.</p> | <p>5. <i>R. Iodinei gr. ij.</i>
 <i>Potassii iodidi gr. viii.</i>
 <i>Cerat. cetacei 3j. M. ft.</i>
 <i>ung.</i>
 <i>Use.</i> Cutaneous and subcuta-
 neous scrofula.</p> <p>6. <i>R. Zinci iodidi ʒj.</i>
 <i>Cerat. cetacei 3j. M. ft.</i>
 <i>ung.</i>
 <i>Use.</i> Scrofulous affections; in
 the non-inflammatory stages
 of eczema and impetigo.</p> <p>7. <i>R. Potassii iodidi gr. viii.</i>
 <i>Plumbi iodidi ʒj.</i>
 <i>Cerat. cetacei 3j. M. ft.</i>
 <i>ung.</i>
 <i>Use.</i> In subcutaneous scrofula.</p> <p>8. <i>R. Barii iodidi gr. x.</i>
 <i>Cerat. cetacei 3ss. M. ft.</i>
 <i>ung.</i>
 <i>Use.</i> In subcutaneous scrofula.</p> <p>9. <i>R. Barii iodidi</i>
 <i>Plumbi iodidi aa gr. x.</i>
 <i>Cerat. cetacei 3ss. M. ft.</i>
 <i>ung.</i>
 <i>Use.</i> In cutaneous and sub-
 cutaneous scrofula.</p> |
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10. *R. Ammoni iodidi 3ss.*
Cerat. cetacei 3j. M. ft.
ung.

Use. In the same cases as the
 last.

lotions and liniments.

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| <p>1. <i>R. Potassii iodidi 3ss.</i>
 <i>Iodinei gr. viii.</i>
 <i>Aq. destillatæ 3viii. M.</i>
 <i>ft. lotio.</i>
 <i>Use.</i> Lupus, scrofulous ulcers,
 chronic non-inflammatory al-
 terations in skin.</p> | <p>2. <i>R. Potassii iodidi 3j.</i>
 <i>Iodinei gr. xii.</i>
 <i>Aquæ 3viii. M. ft. lotio.</i>
 <i>Use.</i> In the same cases as the
 last.</p> |
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| <p>3. <i>R. Potassii iodidi</i> ʒij.
 <i>Iodinei gr. x.</i>
 <i>Glycerinæ</i> ʒiv. M. ft.
 lin.
 <i>Use.</i> In the same cases as the last.</p> <p>4. <i>R. Ammonii iodidi</i> ʒj.
 <i>Glycerinæ</i> ʒj. M. ft. lin.
 <i>Use.</i> In the same cases as the last.</p> | <p>5. <i>R. Potassii iodidi</i> ʒj.
 <i>Aquæ destill.</i> ʒviii. M. ft.
 lotio.
 <i>Use.</i> Scabies.</p> <p>6. <i>R. Potassii iodidi</i> ʒij.
 <i>Potass. sulphureti</i> ʒj.
 <i>Aquæ</i> ʒviii. M. ft. lotio.
 <i>Use.</i> Scabies, chronic non-inflammatory cutaneous affections.</p> |
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BROMINE AND ITS COMPOUNDS.

BROMINE and its compounds are not at present employed in medicine as extensively as the preparations of iodine. They produce, so far at least as the cutaneous diseases are concerned, effects analogous to, if not identical with, those of the last-mentioned agent; and they may be administered in similar cases and combinations. They are said to cause, in some patients, coryza, frontal headache, and the other well-known symptoms which so frequently follow the administration of any of the compounds of iodine; but, if they really possess this property, it must be in a comparatively slight degree, as they have never yet fallen under my own observation, although I have been in the habit of prescribing them extensively for many years; nor have I ever seen any cutaneous complications follow either their prolonged internal administration or their application to the skin.

Bromine has the advantage over iodine that it is much more soluble in water, and is readily dissolved by it in sufficient quantity to be used as a lotion, without the addition of any alkaline bromide. This lotion will be found to be very serviceable as an application to scrofulous ulcers,

and also to the atonic ulcers of cachectic ecthyma, and others of a similar nature.

Bromine, the bromides of potassium, iron, and mercury, are used in medicine. The properties of the two last-mentioned compounds are more analogous to those of their bases than to those of bromine and the alkaline bromides. Various formulæ for the use of bromine and the bromide of potassium will be found below.

A. For Internal Use.

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| <p>1. <i>℞.</i> Potassii bromidi \mathfrak{zss}.
Glycerinæ \mathfrak{zss}.
Aquæ $\mathfrak{ziiiiss}$. M. ft. mist.
Capt. \mathfrak{zij} ter indies.
<i>Use.</i> In cutaneous and subcutaneous scrofula, eczema, and pustular, scrofulous, and syphilitic eruptions.</p> | <p>3. <i>℞.</i> Potassii bromidi gr. vj.
Sacch. alb. \mathfrak{Oij}. M. ft. pulv. vj.
Capt. j ter quotidie.
<i>Use.</i> In the same cases as the last.</p> |
| <p>2. <i>℞.</i> Potassii bromidi \mathfrak{Oj}.
Brominei gtt. viii.
Aquæ \mathfrak{ziv}. M. ft. mist.
Capt. \mathfrak{zij}. ter. indies.
<i>Use.</i> In the same cases as the last.</p> | <p>4. <i>℞.</i> Brominei gtt. xvi.
Glycerinæ \mathfrak{zss}.
Aquæ $\mathfrak{ziiiiss}$ M. ft. mist.
Capt. coch. \mathfrak{ij} parv. ter indies.
<i>Use.</i> In the same cases as the last.</p> |

B. For External Use.

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| <p>1. <i>℞.</i> Brominei gtt. xvi.
Aquæ \mathfrak{zviiij}. M. ft. lotio.
<i>Use.</i> In subcutaneous scrofula and scrofulous ulcers.</p> | <p>3. <i>℞.</i> Brominei gtt. xx.
Cerat. cetacei \mathfrak{zj}. M. ft. ung.
<i>Use.</i> In subcutaneous scrofula.</p> |
| <p>2. <i>℞.</i> Brominei gtt. x.
Pot. bromidi \mathfrak{Oij}.
Aquæ \mathfrak{zviiij}. M. ft. lotio.
<i>Use.</i> In the same cases as the last.</p> | <p>4. <i>℞.</i> Potassii bromidi gr. x.
Brominei gtt. viij.
Cerat. cetacei \mathfrak{zj}. M. ft. ung.
<i>Use.</i> In the same cases as the last.</p> |

MERCURY AND ITS COMPOUNDS.

MOST of the very numerous preparations of mercury contained in the *materia medica* are employed in the treatment of the cutaneous affections occurring during infancy.

They are used much more extensively as external applications, in the shape of ointments, baths, &c., than as internal remedies, not only for the purpose of producing certain local effects on the skin, but with the view of obtaining the well-known curative and constitutional effects resulting from their absorption. The salts of the protoxide of mercury are much less powerful in their effects and more manageable than those of the binoxide, and they should, unless under very peculiar and exceptional circumstances, be exclusively used for internal administration in the diseases of children.

The bichloride of mercury, for example, can scarcely ever be administered to children for many days together without causing diarrhoea, griping pains, and, frequently, vomiting; the biniodide is more active, and will, even in small doses, not unfrequently produce dysenteric symptoms. When the bichloride is prescribed internally, it is best given in the form of the liquor hydrargyri bichloridi of the pharmacopoeia, in water or almond emulsion, but it may occasionally be advantageously combined with the tincture of the sesquichloride of iron, or with the chlorate of potash, as in the formulæ below. The biniodide should be prescribed in solution with iodide of potassium, which readily dissolves it, but the greatest circumspection should be used in prescribing soluble mercurial preparations in combination with the iodides, as a double salt is formed which is extremely active.

The iodide of mercury is a very useful and safe preparation, and may be prescribed either as a powder with sugar or bismuth or in solution with iodide of potassium.

The hydrarg. cum cretâ is probably on the whole the most generally useful of all the mercurial preparations in the cutaneous diseases of infants. It may be administered continuously for a long period without producing any gastro-enteric disturbance, and it may be given in combination with various other medicines, according to the circumstances of each case. Of these combinations those with the lactate of iron, bismuth, salicine, and sulphur are the most generally useful.

The chief use of the mercurial preparations is in cases of cutaneous diseases depending on or complicated with syphilis; in these they are indispensable, their action is certain, and apparently of a specific nature. It is generally necessary to continue their administration for a long period, and more especially when there is any visceral complication; they should, therefore, be given in small doses and be frequently repeated, by which means they are more rapidly absorbed and are less likely to produce any disturbance of the bowels. If diarrhoea should supervene during their use, they may be combined with bismuth or with tannic acid with good effect, as in the formulæ given below. Their administration requires more caution in cases of syphilitic diseases combined with scrofula; in these cases the mercury may be advantageously combined with tonics, such as salicine or lactate of iron. But it is safer to administer it externally in such cases, in the form of mercurial ointment, as will be more fully stated below.

Mercury should be carefully avoided in all cases of cachexia, except in those produced by syphilis. In that form which most resembles the latter, and which is termed the pseudo-syphilitic, it is most injurious; hence the importance of making a careful and accurate diagnosis between the cuta-

neous affections accompanying each of these conditions. See note, page 23.

The mercurial compounds are also generally injurious, and never, I think, beneficial, in those cutaneous affections which are accompanied by and partially dependent upon a low state of nutrition and a feeble vital condition, such as *rupia*, *pemphigus*, *ecthyma*, and *purpura*. They should also, as an almost invariable rule, be avoided in all the vesicular diseases until the vesicular stage has disappeared; nor should they be given in any of the uncomplicated scrofulous affections, with the exception of *impetigo*, in which disease small doses of *hyd. c. cretâ*, combined with sulphur, are of much advantage after the exudative stage has terminated. The same combination may also be recommended in cases of *achor*, when the exudation is disappearing.

The preparations of mercury are employed externally for two purposes: (1) to produce their constitutional effects; (2) on account of their local action.

The constitutional effects may be produced by any of the compounds of mercury, when applied for some time in the form of ointment: but the most convenient form for this purpose is the ordinary mercurial ointment. This may either be rubbed into the skin once or twice daily, or it may be used in the manner recommended by Sir B. BRODIE. He directs that about 3j of the ointment should be spread on a flannel roller, which is to be applied around the knees of the child, and renewed every day. If the strong mercurial ointment be used, it should be applied to a different part of the child's body every day, as its long-continued application on the same part, in syphilitic children, is very apt to remove the epidermis; but I prefer to use the ointment diluted with an equal weight of lard, which does not produce this effect. Sir B. BRODIE is of opinion that infantile syphilis is much more safely and surely treated in this way than by

the internal administration of mercurial compounds, but I cannot say that I have been able to arrive at the same conclusion. In cases of syphilis complicated with scrofula, which are very frequently met with, especially in large towns, and in which, as I have said, the administration of mercury in any form requires great care and caution, I am disposed to think that the treatment by inunction is the safest and best.

Almost all of the preparations of mercury may be effectively used in the form of ointments in various forms and stages of the diseases of the skin. The most generally useful of these are ointments containing calomel, the iodide of mercury, white precipitate, or mercury and chalk. One rule, however, should be observed in prescribing any of those I have mentioned; that is—that they should not be used as long as any inflammatory symptoms remain, nor until the exudative stage has passed or is about to pass away. In the chronic and scaly stage of the vesicular and pustular diseases, in psoriasis, or in any chronic cuticular desquamation, they are more beneficial than any ointments with which I am acquainted. If the preparations above mentioned are prescribed while the inflammatory symptoms are present, they should be combined with the acetate or diacetate of lead.

If exudation is still going on, it is better to combine them with the iodide or oxide of zinc, or with the carbonate or trisnitrate of bismuth. In scrofulous affections they may be advantageously prescribed with the iodide of lead or the iodide of potassium.

Ointments containing the white precipitate require greater caution in their use than any of those I have mentioned, as this preparation is very rapidly absorbed and may produce the constitutional effects of mercury where they are not desired.

The ointments containing bisulphuret of mercury, or the bisulphuret in combination with sulphur, will be found very useful in various chronic scaly conditions of the skin, whether primary or secondary.

The ointments containing the nitrate of mercury and the nitric oxide have a remarkable stimulant effect, in addition to the common properties possessed by all mercurial ointments; and they are particularly valuable when used as a dressing to atonic ulcers, such as those consequent on cachectic ecthyma or rupia. They are also of almost equal value in the superficial scrofulous ulcers, and in those accompanying infantile syphilis.

The biniodide of mercury is a very energetic agent when used in the form of ointment. Its effects vary materially according to the quantity employed. When used in a state of considerable dilution, as in formulæ 11 and 12, it may be used with great advantage in the most inveterate and rebellious forms of the chronic squamous conditions of the skin, from whatever cause they may proceed; but, as I have said, it is very powerful, and should never be used over an extensive surface. When used in larger quantities, as in formula 10, it is one of the most active agents we possess; it rapidly excites an inflammation of the skin somewhat similar to erysipelas; and it is used with greater success than almost any remedy in cases of lupus.

The curative effects of mercury may also be very rapidly and safely produced by mercurial fumigations, but they are very difficult to employ in young children, and their advantages over mercurial inunction are not sufficient to counterbalance the difficulties attending their use.

Warm baths containing bichloride of mercury are extremely useful in many varieties of cutaneous affections occurring in children. In cases of infantile syphilis they may be used daily, and if the disease is not very severe they are rapidly

followed by an obvious improvement in the symptoms. They are also useful in cases of lichen and prurigo, and in many other diseases, more especially those attended with intense itching. The temperature at which they are used should be regulated by the age and strength of the child, and by the frequency of their repetition: the younger and the weaker the child is the lower the temperature should be; it should also be somewhat lower when the bath is repeated daily than when it is given at intervals of two or three days. One drachm of the bichloride of mercury may be added to a sufficient quantity of water to make a bath in the first instance, and the quantity of the bichloride may be afterwards gradually increased up to two or three drachms if necessary. If they are used for the special object of relieving the itching, they should be used as hot as they can be borne without inconvenience; but the bichloride is generally most conveniently and effectively used for this purpose in the form of lotions.

A. For Internal Use.

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| <p>1. <i>R.</i> Hyd. iodidi gr. viij.
Potassii iodidi ʒss to ʒj.
Glycerinæ ʒss.
Aquæ ʒiiss. M. ft. mist.
Capt. ʒj ter quotidie.</p> <p><i>Use.</i> In severe forms of infantile syphilis and scrofulo-syphilis.</p> | <p>3. <i>R.</i> Hyd. biniod. gr. j.
Ferri iodidi ʒss.
Potassii iodidi ʒss to ʒj.
Glycerinæ ʒiv.
Aquæ ʒiiss. M. ft. mist.
Capt. ʒj ter indies.</p> <p><i>Use.</i> The same as the last.</p> |
| <p>2. <i>R.</i> Hydrarg. biniodidi gr. j.
Potassii iodidi ʒss to ʒj.
Aquæ ʒiv. M. ft. mist.
Capt. ʒj ter indies.</p> <p><i>Use.</i> The same as the last, but it is much more powerful, and requires great caution in its administration.</p> | <p>4. <i>R.</i> Liq. hydrarg. bichl. ʒij.
Tinct. ferri sesquichl. ʒss to ʒj.
Aquæ ʒij. M. ft. mist.
Capt. coch. j parv. ter indies.</p> <p><i>Use.</i> Chronic syphilitic affections, with anæmia.</p> |

5. *R. Lig. hydrarg. bichl. ʒij.*
Potassæ chloratis ʒij to ʒj.
Mist. amygdalæ ʒij. M.
ft. mist.
Capt. coch. j parv. ter
indies.
Use. In infantile syphilis, more especially when affecting the mucous membranes.
6. *R. Hydrarg. iodidi gr. i to iij.*
Sacch. alb. gr. xx.
M. et div. in pulv. vi.
Capt. j ter indies.
Use. In infantile syphilis.
7. *R. Hyd. iodidi gr. i.*
Bismuthi carbonat. gr. xx
to ʒss.
M. et div. in pulv. vi.
Capt. j ter indies.
Use. In infantile syphilis and the chronic stage of eczema, when there is a tendency to diarrhoea.
8. *R. Hyd. c. cretâ gr. iv to viii.*
Sulp. præcip. gr. iv to xii.
Sacch. alb. ʒj.
M. et div. in pulv. viii.
Capt. j ter quotidie.
Use. In the chronic stage of achor, eczema, and in the chronic scrofulo-syphilitic affections.
9. *R. Hyd. c. cretâ gr. iv to viii.*
Bismuth. trisnit ʒj to ʒss.
Acidi tannici gr. iij.
M. et div. in pulv. viii.
Capt. j ter quotidie.
Use. In syphilis, pemphigus, &c., complicated with diarrhoea and cachexia.
10. *R. Hyd. c. cretâ gr. vi.*
Ferri lactatis gr. xii to ʒj.
Sacch. alb. ʒj. M. ft. pulv.
xii.
Capt. j ter quotidie.
Use. In syphilitic cachexia, syphilis, rupia, ecthyma, &c.
11. *R. Hyd. c. cretâ gr. vi.*
Salicinæ gr. xii to xxx.
Sacch. alb. ʒj. M. ft. div.
in pulv. xii. capt. j
tertiâ quâque horâ.
Use. In the same cases as the last.

B. For External Use.

I. OINTMENTS.

1. *R. Hydrarg. chloridi ʒss.*
Cerat. cetacei ʒss. M.
ft. ung.
Use. In the scaly stage of eczema, and in almost any disease of the skin after the inflammatory stage has terminated.
2. *R. Hyd. chlor. ʒss.*
Sulp. præcip. gr. x.
Arungis ad. ʒiv. M. ft.
ung.
Use. Lepra, psoriasis, pityriasis, and the scaly stages of eczema, impetigo, &c.

3. *R. Hydrarg. chloridi* $\mathcal{O}j$.
Bismuth. trinit gr. x.
Cerat. cetacei ad. $\mathfrak{z}iv$. M.
ft. ung.
Use. In the same cases as the last; may be used during the humid stage of eczema, achor, &c.
4. *R. Hydrarg. chloridi* $\mathcal{O}j$.
Zinci oxydi gr. x.
Cerat. cetacei ad. $\mathfrak{z}iv$. M.
ft. ung.
Use. The same as the last.
5. *R. Hydrarg. chloridi* $\mathcal{O}ij$.
Cerat. plumbi acetatis
 $\mathfrak{z}iv$. M. ft. ung.
Use. Eczema, herpes, impetigo, psoriasis; may be used at a very early stage of the disease.
6. *R. Hyd. chloridi* $\mathfrak{z}ss$.
Ung. hyd. nit. oxyd. $\mathfrak{z}ij$.
Cerat. cetacei $\mathfrak{z}ij$. M. ft.
ung.
Use. In severe cases of eczema, impetigo, &c., in the chronic and scaly stage.
7. *R. Hydrarg. iodidi* $\mathcal{O}j$.
Cerat. cetacei $\mathfrak{z}ss$. M.
ft. ung.
Use. In the chronic stages of the inflammatory diseases of the skin.
8. *R. Hydrarg. iodidi* $\mathcal{O}j$.
Zinci iodidi gr. x.
Cerat. cetacei $\mathfrak{z}j$. M. ft.
ung.
Use. The same as the last.
9. *R. Hydrarg. iodidi* $\mathcal{O}j$.
Plumbi iodidi $\mathfrak{z}ss$.
Cerat. cetacei ad. $\mathfrak{z}iv$. M.
ft. ung.
Use. In cutaneous and sub-cutaneous scrofula.
10. *R. Hydrarg. iodidi* $\mathcal{O}j$.
Potassii iodidi gr. v.
Cerat. cetacei $\mathfrak{z}iv$.
Use. Cutaneous and sub-cutaneous scrofula, lupus.
11. *R. Hydrarg. biniodidi* $\mathfrak{z}ss$.
Axungiae $\mathfrak{z}ss$. M. ft. ung.
Use. Escharotic; chiefly used to produce inflammation of the skin in lupus.
12. *R. Hydrarg. biniod. gr.* viii.
Cerat. cetacei $\mathfrak{z}j$.
M. ft. ung.
Use. In subcutaneous scrofula, superficial lupus, &c.
13. *R. Hydrarg. biniodidi* gr. iv.
Cerat. cetacei $\mathfrak{z}j$.
Use. In inveterate scaly diseases, and the last stages of chronic eczema. It should not be used over an extensive surface.
14. *R. Hydrarg. ammonio-chl.*
gr. x.
Zinci oxydi gr. x.
Cerat. cetacei $\mathfrak{z}iv$. M.
ft. ung.
Use. Psoriasis, pityriasis, lichen.
15. *R. Hydrarg. ammon.-chl.* $\mathcal{O}j$.
Sulp. præcip. $\mathcal{O}j$.
Ol. cajuputi $\mathfrak{z}ss$.
Cerat. cetacei $\mathfrak{z}i$. M. ft.
ung.
Use. In scabies and the pedic-ular disease.
16. *R. Ung. hydrarg. nitr.* $\mathfrak{z}ij$.
Plumbi nitratis $\mathfrak{z}j$.
Axungiae $\mathfrak{z}vi$. M. ft. ung.
Use. In the exudative diseases of the skin, especially where there is much itching.

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| <p>17. <i>℞. Ung. hyd. nitratis</i> ʒij.
 <i>Bismuthi trisnit</i> ʒss.
 <i>Cerat. cetacei</i> ʒij.
 <i>M. ft. ung.</i>
 <i>Use.</i> The same as the last.</p> <p>18. <i>℞. Hydrarg. bisulp. ʒij.</i>
 <i>Cerat. cetacei</i> ʒiv. <i>M.</i>
 <i>ft. ung.</i>
 <i>Use.</i> In the last stage of vesicular and pustular diseases.</p> <p>19. <i>℞. Hydrarg. bisulp. ʒss.</i>
 <i>Sulp. præcip gr. x.</i>
 <i>Cerat. cetacei</i> ʒiv. <i>M. ft.</i>
 <i>ung.</i>
 <i>Use.</i> In the inveterate forms of eczema, psoriasis, achor, &c.</p> | <p>20. <i>℞. Hyd. bisulp. c. sulphure</i>
 <i>ʒss.</i>
 <i>Cerat. cetacei</i> ʒiv. <i>M. ft.</i>
 <i>ung.</i>
 <i>Use.</i> In the same cases as the last.</p> <p>21. <i>℞. Hydrarg. subsulp. flā. ʒj.</i>
 <i>Cerat. cetacei</i> ʒiv. <i>M.</i>
 <i>ft. ung.</i>
 <i>Use.</i> In the same cases as the last.</p> <p>22. <i>℞. Hydrarg. c. cretā ʒij.</i>
 <i>Ung. glycerinæ</i> ʒiv. <i>M.</i>
 <i>ft. ung.</i>
 <i>Use.</i> Very useful in almost all diseases of the skin, after the inflammatory stage has subsided.</p> |
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II. LOTIONS.

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| <p>1. <i>℞. Hydrarg. bichloridi</i> ʒj.
 <i>Aquæ ʒxii. M. ft. lotio.</i>
 <i>Use.</i> To allay severe itching when the skin is not excoriated. It should be diluted with a little hot water, and applied as hot as it can be borne.</p> | <p>2. <i>℞. Hydrarg. bichl. gr. viii.</i>
 <i>Glycerinæ ʒss.</i>
 <i>Aq. rosæ ʒviiss. M. ft.</i>
 <i>lotio.</i>
 <i>Use.</i> In strophulus, lichen, chronic urticaria, &c.</p> |
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3. *℞. Hydrarg. bichl. gr. x.*
Acidi hydrocyanici dil.
ʒiiss.
Aq. rosæ ad. ʒviij. M. ft.
lotio.
Use. The same as No. 2.

SULPHUR.

SULPHUR was formerly very extensively prescribed as a remedy for various diseases of the skin, but of late years it has fallen into comparative and undeserved disuse. The want of success which so frequently attends its employment is to be ascribed to the following causes: first, to the fact that it is usually prescribed in doses much too large; and, secondly, that sufficient care is not taken in the selection of the cases in which it is administered. It does not, like arsenic and mercury, possess any very powerful physiological properties, and, consequently, its administration in unsuitable cases is generally attended with no worse effect than a material aggravation of the symptoms of the disease. This remedy, when administered internally in small doses, acts as a stimulant to the cutaneous functions, and slightly as a diaphoretic. It passes off to some extent by the skin, but chiefly by the urine, in which it is found partly oxidised and partly in the state of free sulphur; it also increases and modifies the intestinal excretions.

In children its use should be limited almost entirely to cutaneous diseases occurring in scrofulous constitutions—such, for instance, as impetigo, achor, and some cases of eczema; and in these it should never be given as long as any considerable inflammation of the skin remains, or while fresh crops of the eruption are appearing; nor can it be given with much prospect of success during the stage of exudation, which accompanies the inflammatory stage and continues for some time afterwards. But when the exudative is about to pass into the dry stage, and during the continuance of the latter, it may be given with great advantage. It may also be prescribed with good results in the chronic and dry stages of other cutaneous affections, especially in

asthenic children, in whom the circulation is languid and the surface pale and cold.

If it be given during the continuance of the inflammatory symptoms the disease will almost certainly be aggravated. If it be prescribed at the commencement of the exudative stage the same result will ensue. If there is any severe itching of the surface its employment should be avoided until this symptom has been mitigated by suitable means. If the eruption has disappeared or is disappearing from one part of the body, and is appearing on other parts, this remedy will almost always be injurious.

Sulphur does not exert by any means a rapid curative action over any cutaneous disease when administered internally; it is, therefore, necessary to continue its use for a considerable period before judging of its effects. As I have previously observed, it should be administered in small doses, which should be repeated several times a day. It may be conveniently prescribed either in suspension in some mucilaginous liquid or as a powder, and it may be advantageously combined with various other remedies, according to the exigencies of each particular case. For instance: in commencing its administration in cases of *achor* or *eczema* it is well to give it, for the first two or three days, with nitrate of potash or carbonate of soda, or in severe cases, in which the *scrofulous diathesis* is not strongly marked, with iodide of mercury or mercury and chalk. In very protracted cases of either of these diseases, when the children are pallid and cold, with a tendency to sub-cutaneous *œdema*, it may be given with *salicine*, or with small doses of sulphate of zinc, or with glycerine and *calumba*.

Sulphur is very commonly used, in the form of ointment, in cases of *scabies*. Many formulæ have been suggested, but it is a matter of very little consequence how it is combined, and any of them are efficacious when *well* and

properly used. The quantity of sulphur contained in most of them is, however, much too great, and it frequently produces a great amount of irritation and many secondary eruptions on the delicate skin of children. I prefer to combine the sulphur with the biborate or carbonate of soda, which are less irritating and quite as efficacious as the salts of potash. In combination with the oil of cajuput, as in the formula given below, it forms a very powerful and certain remedy for this troublesome affection. The formula for HELMERICH's ointment, which is extensively employed in the foreign hospitals, will be found at page 174, but I cannot recommend this ointment to be used in cases of children.

Sulphur is also used in the form of ointment as a stimulant application in some other varieties of cutaneous affections, and more particularly in the chronic stage of the scaly diseases. It should be used in such cases with great caution, and should form a much less proportion to the bulk of the ointment than it does in those prescribed for scabies. Several formulæ for its external use will be found below.

Sulphuret of potassium is occasionally used, in baths, lotions, and ointments, in scabies and other diseases of the skin; but as it is somewhat uncertain in its effects, and possesses no manifest advantages over sulphur itself, I never employ it in the cutaneous diseases of children.

The application of sulphur or sulphuret of potassium to the skin, either in the form of ointment or lotions, not unfrequently excites a superficial inflammation of the skin, which is soon followed by the appearance of a number of small vesicles; these rapidly increase in size and become more or less confluent, their contents at the same time acquiring a sero-purulent or purulent character. At this time they are surrounded by extensive areolæ, and may be readily mistaken either for the purulent variety of scabies, or for an ecthymatous eruption, from each of which it is very important to distinguish them.

A. For Internal Use.

1. *R.* Sulp. præcip. gr. v.
Potassæ nitratis ʒss.
Sacch. alb. ʒss. *M.*
Et div. in pulv. x.
Capt. j ter indies.

Use. In achor, impetigo, and eczema.

2. *R.* Sulp. præcip. gr. v.
Hyd. iodidi gr. ij.
Sacch. alb. ʒij.
M. et div. in pulv. x.
Capt. j ter indies.

Use. In the same cases as the last.

3. *R.* Sulp. præcip. gr. v.
Sodæ carb. exsicc. ʒss.
Sacch. alb. ʒss.
M. et div. in pulv. x.
Capt. j ter indies.

Use. In psoriasis, pityriasis, and the scrofulous affections of the skin.

4. *R.* Sulp. præcip. gr. x.
Hyd. c. cretâ gr. v.
Potassæ nitratis ʒss.
Sacch. alb. ʒss.
M. et div. in pulv. x.
Capt. j ter indies.

Use. In the scaly diseases; syphilitic roseola in the scaly stage, &c.

5. *R.* Sulp. præcip. gr. viii.
Glycerinæ ʒss.
Infusi calumbæ ʒiiiss.
M. ft. mist.
Capt. ʒij ter indies.

Use. In the chronic stages of asthenic eczema or achor, and in the scaly diseases.

6. *R.* Zinci sulph. gr. v.
Sulp. præcip. gr. viii.
Acid sulph. dil. ʒss.
Pulv. acaciæ ʒij.
Aquæ ʒiv.
M. ft. mist. capt.
ʒij ter quotidie.

Use. In the same cases as the last.

B. For External Use.

1. *R.* Sulp. præcip. gr. x.
Ung. hydrarg. nit. ʒij.
Axungiæ ʒvi. *M.* ft. ung.

Use. In chronic scaly diseases, particularly when of syphilitic origin.

2. *R.* Sulp. præcip. gr. xii.
Zinci oxidi ʒj.
Axungiæ ʒss. *M.* ft. ung.

Use. In the chronic scaly affections of the skin.

3. *R.* Sulp. præcip. gr. xx.
Ol. cajuputi ʒj.
Cerat. cetacei ʒj. *M.* ft. ung.

Use. In scabies.

4. *R.* Sulp. præcip. gr. x.
Sodæ biborat. ʒj.
Axungiæ ʒss. *M.* ft. ung.

Use. In scabies.

5. *R.* Sulp. præcip. gr. xx.
Sodæ carb. exsicc. ʒss.
Axungiæ ʒss. *M.* ft. ung.

Use. In scabies.

ARSENIC AND ITS PREPARATIONS.

ARSENIC and its compounds are used in various cutaneous affections, both internally and externally.

When administered internally they are of very limited utility in the cutaneous diseases of infants and children; and are, indeed, very frequently productive of much more mischief than good. The younger the infant is the greater are the objections, *cæteris paribus*, to their use. In the cases of children at the breast their administration should be altogether prohibited, nor should they be prescribed for older children when there is any irritative or inflammatory condition of the gastro-intestinal or gastro-pulmonary mucous membranes, as indicated by the state of the mouth and tongue, by eruptions on the lips and around or just within the nose, by nausea, vomiting, or diarrhœa. They should also be most carefully avoided when there is any febrile disturbance, or any acute or subacute inflammation of the skin, more especially when the latter is accompanied by any serous or sero-purulent discharge, or by much itching. When the preparations of arsenic are given under the circumstances above-mentioned, no matter in what combinations they may be prescribed or how cautiously they may be administered, they will almost invariably increase the gastro-intestinal disturbance and the febrile condition—the tongue will become coated with a thick, white fur, the diarrhœa, if any existed, will be increased, and the nausea or vomiting and inability to digest the food will be materially aggravated—the effect of which will be not only to prevent the curative effects of the remedy from being manifested, but to cause a fresh and probably a much more severe outbreak of the disease under which the patient happens to be suffering.

The arsenical preparations should also be avoided in any cases, otherwise suitable for them, in which the scrofulous diathesis is well marked; it is obvious enough that it is of the last importance in such cases to prohibit the administration of any medicine which has any tendency to interfere with the proper performance of the assimilative functions.

In children, as in adults, the preparations of arsenic will be found of the most benefit in the chronic scaly affections. Of these, by far the most frequent in children is pityriasis, but this may be almost always cured by other and safer means. Lepra and psoriasis are seldom met with in children, at least to such a degree as to require the administration of arsenic, until after the age of seven years. In children under that age the use of arsenic should, I think, be limited to the chronic and scaly stages of pityriasis, eczema, and impetigo, and to those somewhat rare cases of psoriasis which have resisted a less hazardous treatment. After the age of seven years the arsenical preparations may, however, be sometimes used with very good effect in cases of lichen and prurigo, after the acute or febrile stage has been subdued.

The principal preparations of arsenic used as medicine are—the liquor potassæ arsenitis, the arsenite of soda, the liquor arsenici chloridi, and the iodide of arsenic. Any of these are to be preferred to the last-mentioned, which is very uncertain in its action and possesses no special advantages. I prefer either the liquor arsenici chloridi or a solution of arsenious acid in water. Formulæ containing all these preparations, except the iodide, will be found below. The most efficacious as well as the safest mode of administering arsenic is to give it in very small doses, well diluted, and to continue it for a few days only—then, after a short interval, to resume it, if it should be required. It should always be prescribed for infants and children in combination

with some diuretic salt, such as nitrate, acetate, or chlorate of potash, or iodide of potassium, which I believe add considerably to the rapidity, certainty, and safety of its action, and tend very powerfully to prevent any of those unpleasant effects to which I have alluded.

When swelling of the eyelids and injection of the conjunctiva occur during the administration of arsenic, it should at once be discontinued. The same rule should be observed if symptoms of diarrhœa or gastric irritation should supervene. No medicines, especially of an astringent nature, should on any account be combined with the arsenic, with a view of obviating the effects just specified.

Arsenic is occasionally used externally as a caustic, and chiefly in cases of lupus; but caustic applications are very seldom required in cases of that disease in children, and when they are really needed the chloride of zinc is to be preferred.

The long-continued administration of any of the compounds of arsenic is very frequently followed by the appearance of a variety of eruptions on the skin—some of them of a very painful and severe character; but as it is seldom possible, and never necessary, to continue the use of this medicine in children for a sufficient length of time to produce them, I shall not give a minute description of them, but merely call the attention of practitioners to the possibility of their occurrence.

A. For Internal Use.

1. *R.* Liq. arsenici chloridi ʒss.
Potassæ chloratis ʒij.
Aquæ ʒiv. M. ft. mist.
Capt. coch. ij parv. ter
indies.

Use. In the chronic scaly diseases, scaly period of eczema, &c.

2. *R.* Liq. arsenici chl. ʒss.
Potassæ nitratis ʒj.
Aquæ ʒiv. M. ft. mist.
Capt. coch. ij parv. tertiâ
quâque horâ.

Use. In the same cases as the last.

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| <p>3. <i>℞. Liq. potassæ arsenitis</i>
 <i>℥ss.</i>
 <i>Potassii iodidi ℥ss.</i>
 <i>Aquæ ℥iv. M. ft. mist.</i>
 <i>Capt. coch. ij parv. ter</i>
 <i>indies.</i>
 <i>Use.</i> In lupus, psoriasis, pityri-
 <i>asis, &c.</i></p> <p>4. <i>℞. Sol. acidi arseniosi ℥ss.*</i>
 <i>Glycerinæ ℥ss.</i>
 <i>Aquæ ℥iii. M. ft. mist.</i>
 <i>Capt. coch. j parv. ter</i>
 <i>quotidie</i>
 <i>Use.</i> In chronic cases of achor,
 <i>eczema, and impetigo.</i></p> <p>5. <i>℞. Sodæ arsenitis gr. j.</i>
 <i>Sodæ nitratis ℥ij.</i>
 <i>Aquæ ℥iv. M. ft. mist.</i>
 <i>Capt. ℥j ter indies.</i>
 <i>Use.</i> In the same cases as the
 <i>last.</i></p> | <p>6. <i>℞. Liq. pot. arsenitis ℥ss.</i>
 <i>Potassæ acetatis ℥ij.</i>
 <i>Aquæ ℥iv. M. ft. mist.</i>
 <i>Capt. ℥j ter indies.</i>
 <i>Use.</i> In the same cases as the
 <i>last.</i></p> <p>7. <i>℞. Sol. acidi arseniosi ℥ij.</i>
 <i>Quinæ disulp. gr. x.</i>
 <i>Acid. sulph. dil. ℥ss.</i>
 <i>Aquæ ℥iv. M. ft. mist.</i>
 <i>Capt. ℥ij ter indies.</i>
 <i>Use.</i> In inveterate cases of
 <i>eczema with great debility.</i></p> <p>8. <i>℞. Liq. arsenici chloridi ℥ss.</i>
 <i>Tinct. ferri sesquichl. ℥j.</i>
 <i>Aquæ ℥iv. M. ft. mist.</i>
 <i>Capt. coch. ij. parv. tertiâ</i>
 <i>quâque horâ.</i>
 <i>Use.</i> In recurring eczema and
 <i>impetigo in scrofulous chil-</i>
 <i>dren when the inflammatory</i>
 <i>symptoms have subsided.</i></p> |
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SALTS OF POTASH, SODA, AND AMMONIA.

THE salts of potash, soda, and ammonia are very extensively used in the treatment of the various cutaneous affections occurring in children. They are, without doubt, the safest as well as the most efficient curative agents we possess in the early stages of the greater number of these diseases.

They act as diuretics, aperients, or antiphlogistics, according to the doses in which they are given and the mode of combination in which they are prescribed.

If their diuretic effect is desired, they should be given in small doses, well diluted, and either in solution in water, or in combination with other diuretics. The most efficient as diuretics are the nitrates of potash and soda, the acetate

* The solution of arsenious acid used by me is prepared by boiling arsenious acid in water to which a few drops of sulphuric acid has been added, and filtering *when cold*. The medium dose for a child is ten drops.

of potash, and the benzoate of ammonia. The acetate of potash always passes off in the urine in the state of carbonate, and *invariably* renders the urine alkaline. The benzoate of ammonia is converted into hippurate during its passage through the system, and it generally renders the urine acid. The nitrates of potash and soda pass off by the urine unchanged. Any of these salts administered as diuretics, according to the formulæ given below, are of the greatest service in the treatment of eczema, impetigo, psoriasis, urticaria, &c., and may generally be given as long as any febrile symptoms remain, or whilst fresh crops of eruption continue to appear.

When we desire to produce the antiphlogistic action of these salts, they should be given in larger doses and not so much diluted as when their diuretic effect is required. The nitrate of potash is by far the most powerful of these salts as an antiphlogistic, and its effects may be depended upon. It has, moreover, this advantage—that it may be administered with perfect safety to children of any age. The nitrate and sulphate of soda, the acetate and chlorate of potash, may also be given for the same purpose. They should be combined either with some mineral or vegetable acid or with some of the more powerful tonics, according to the sthenic or asthenic nature of the inflammation they are prescribed to relieve. Their almost immediate effect is to reduce the febrile symptoms, to lessen the frequency of the pulse, and to diminish, or at the least to limit the extension of, the inflammation of the skin. At the very commencement of erysipelas, erythema, urticaria, herpes, eczema, impetigo, &c., these remedies are most valuable; but the success with which they are administered depends almost entirely on the mode in which they are combined, and on the selection of the appropriate combination, with reference to the peculiarities of each individual case. I

have only space to say generally—that if the child is strong and vigorous, if the febrile symptoms be well marked, and the inflammation or eruption be not spreading with great rapidity, the most powerful antiphlogistics, such as the nitrate of potash, with nitric or citric acid, or other combinations of a similar character, should be prescribed. But if, on the other hand, the febrile symptoms should be less evident, if the child should be weak, cachectic, or scrofulous, or if the inflammation should manifest a great tendency to spread or to attack distant parts—then the chlorate of potash, with cinchonine, salicine, or the sesquichloride of iron, should be preferred. The latter combination is very suitable to such cases as asthenic erysipelas, cachectic ecthyma, &c. Many formulæ between these extremes, and suitable to different combinations of symptoms, are given below. If there are any gastro-enteric symptoms present, such as diarrhoea, vomiting, &c., the biborate of soda and the extract of cinchona, as in formula 7, will be found to be very valuable remedies.

The phosphate, sulphate, and potassio-tartrate of soda, the tartrate and bitartrate of potash, are the most useful and efficient aperients that can be prescribed for children who are suffering under any inflammatory affection of the skin. They must be given in much larger doses than those required to produce a merely diuretic or antiphlogistic effect, and they may be given either in simple solution or in combination with other aperients, such as rhubarb or senna.

The carbonates or bicarbonates of potash and soda, the biborate of soda, and the cyanide of potassium are extensively used as external applications, either in the form of lotions, or ointments, or as baths, for the relief of various inflammatory affections of the skin, more especially when they are attended with much itching. They are generally used for this purpose in too concentrated a form and are

applied for too long a period; their effect then is to render the skin dry and irritable, and disposed to crack and excoriate, conditions which materially favour the continuance or reappearance of the eruptions. When they are used in a very weak form, and in combination with hydrocyanic acid or glycerine they will be found very efficacious in allaying the troublesome itching which accompanies lichen, prurigo, and the early stages of eczema. They should be used sparingly for a short time—three or four times a day; but their use should not be persevered with for many days together for the reasons above named.

Strong alkaline lotions and ointments are of much service in removing the crusts of eczema and impetigo, and they should only be used for this purpose.

A.—For Internal Use.

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| <p>1. <i>R. Sodæ phosphatis</i> ʒj.
 <i>Mist. amygdalæ</i> ʒiv. <i>M.</i>
 <i>ft. mist.</i>
 <i>Capt. coch. ij parv. tertiâ</i>
 <i>quâque horâ.</i>
 <i>Use.</i> In the scaly stage of
 eczema and impetigo.</p> | <p>4. <i>R. Potassæ nitratis</i> ʒj.
 <i>Acid. nitrici dil.</i> ʒss.
 <i>Aquæ</i> ʒiv. <i>M. ft. mist.</i>
 <i>Capt. coch. ij parv. tertiâ</i>
 <i>quâque horâ.</i>
 <i>Use.</i> In the same cases and
 conditions as the last.</p> |
| <p>2. <i>R. Sodæ phosp.</i> ʒj.
 <i>Acidi phosphorici dil.</i> ʒss.
 <i>Aquæ</i> ʒiv. <i>M. ft. mist.</i>
 <i>Capt. ʒij ter quotidie.</i>
 <i>Use.</i> Refrigerant and antiphlo-
 gistic, in any inflammatory
 eruption on the skin, attended
 with fever, e. g., eczema,
 herpes, acute urticaria, ery-
 sipelas, &c.</p> | <p>5. <i>R. Potassæ nitratis</i> ʒj.
 <i>Acid. citrici</i> ʒij.
 <i>Syr. simp.</i> ʒss.
 <i>Aquæ ʒiiiss.</i> <i>M. ft. mist.</i>
 <i>Capt. coch. ij parv. tertiâ</i>
 <i>quâque horâ.</i>
 <i>Use.</i> In the same cases as the
 last.</p> |
| <p>3. <i>R. Sodæ potassio-tart.</i> ʒij.
 <i>Potassæ nitratis</i> ʒj.
 <i>Aquæ</i> ʒiv. <i>M. ft. mist.</i>
 <i>Capt. coch. ij parv. tertiâ</i>
 <i>quâque horâ.</i>
 <i>Use.</i> In the same cases and
 conditions as the last.</p> | <p>6. <i>R. Potassæ nitratis</i> ʒij.
 <i>Infusi scoparii</i>
 <i>Infusi cascariillæ aa</i> ʒiv.
 <i>M. ft. mist. capt. coch. j</i>
 <i>larg. ter indies.</i>
 <i>Use.</i> Diuretic; in urticaria,
 psoriasis, &c.</p> |

7. *R.* Sodæ biberatis ʒj.
Ext. cinchon. ʒij.
Aq. anisi. ʒiv. M. ft. mist.
Capt. coch. ij parv. tertiâ
quâque horâ.

Use. In the febrile stage of the inflammatory affections of the skin, when complicated with gastro-enteric symptoms.

B.—For External Use.

LOTIONS.

1. *R.* Sodæ biberat. ʒj.
Glycerinæ ʒss.
Aquæ ʒviiss. M. ft. lotio.
Use. In prurigo, lichen, and other inflammatory affections of the skin to allay itching.
2. *R.* Potassæ bicarb. ʒss.
Acidi hydrocyan. dil. ʒij.
Aquæ ʒviii. M. ft. lotio.
Use. The same as the above.
3. *R.* Potassii cyanidi gr. xv.
Glycerinæ ʒss.
Aquæ ʒviiss. M. ft. lotio.
Use. The same as the last.
4. *R.* Sodæ biber. ʒij.
Acidi hydrocyan. dil. ʒij.
Aquæ ʒviij. M. ft. lotio.
Use. The same as the last.

5. *R.* Spt. vin. rect. ʒiij.
Potassii cyanidi ʒj.
Potassæ liq. ʒss.
Aquæ ad. ʒviij. M. ft. lotio.
Use. The same as the last, but much stronger.
6. *R.* Potassæ bicarb. ʒiss.
Aquæ Oss. M. ft. lotio.
Use. To remove the crusts of eczema, impetigo, &c.
7. *R.* Potassæ liq. ʒj.
Potassæ bicarb. ʒj.
Aquæ Oss. M. ft. lotio.
Use. The same as the above, but stronger.

OINTMENTS.

1. *R.* Sodæ biberat. ʒj.
Cerat. cetacei ʒss. M. ft. ung.
Use. For inflammatory affections of the skin, to allay itching.
2. *R.* Potassæ bicarb. ʒj.
Cerat. cetacei ʒss. M. ft. ung.
Use. The same as the last.

3. *R.* Potassii cyanidi ʒj.
Zinci oxidi gr. x.
Axungiæ ʒj. M. ft. ung.
Use. Lichen, prurigo, and other inflammatory affections of the skin; very useful in allaying itching.
4. *R.* Potassii cyanidi gr. xv.
Cerat. plumbi acet. ʒj. M. ft. ung.
Use. The same as the last.

VEGETABLE TONICS.

THE vegetable tonics are of the greatest possible value in the treatment of almost all the cutaneous diseases occurring in children. In the acute affections the time and mode of their employment not unfrequently makes all the difference between a rapid recovery and a protracted and tedious convalescence, chequered by many relapses; whilst in the chronic cases their judicious administration not only enables the patient to resist the wasting effects of many severe and deep-seated diseases, but also materially assists the curative action of other remedies. Some of them, such as quinine, cinchonine, and salicine, are not merely tonics, but, in a certain sense, antiphlogistic also. This effect they appear to produce proximately by their tonic and astringent action on the capillary vessels, and more remotely by their beneficial influence over the general health of the patients. In those affections of the skin which are accompanied with much febrile disturbance, with a papular or scaly eruption, or with a viscid serous exudation, and with little tendency to spread, and particularly if the disease be confined to the skin itself, these remedies should be administered as soon as the febrile symptoms have been diminished by the use of aperient and saline medicines; but if the inflammation of the skin is accompanied by little or no fever, if it manifests a great tendency to spread, if the exudation is sero-sanguinolent, sero-purulent, or purulent, if it has extended to the subcutaneous cellular tissue, if the diathesis be scrofulous or the constitution cachectic, then these remedies may be advantageously administered from the very commencement of the disease. They may be given either alone or in various combinations, according to the predominance of certain symptoms. If, for example,

there should be much fever, they should be prescribed with some of the mineral or vegetable acids; if the local inflammation is very intense, with salines, more particularly with the nitrate of potash, or with the tincture of aconite in very small doses; if the exudation is sero-sanguinolent, or shows a great tendency to spread with rapidity, and especially if the subcutaneous cellular tissue is œdematous, they should be given with the ferruginous tonics; if the patient is scrofulous or cachectic, with glycerine and chlorate of potash.

Cinchonia and its salts are not so bitter as the preparations of quinine, nor do they produce as much headache, deafness, or ringing in the ears; and as their curative effects are quite equal to those of quinine in the cases which we have now under consideration I strongly recommend them for general administration to children.

1. *℞. Quinæ disulp. gr. vi.*
Acid. sulp. dil. ʒss.
Glycerinæ ʒss.
Aquæ ad. ʒvi. M.
Ft. mist. capt. coch. j
larg. ter quotidie.

Use. Tonic; in asthenic or scrofulous inflammations of the skin, &c.

2. *℞. Quinæ disulph. gr. x.*
Acid. sulp. dil. ʒss.
Inf. cascarillæ ad. ʒiv. M.
Capt. coch. ij parv ter
indies.

Use. Tonic; in the same cases as the last.

3. *℞. Quinæ disulp. gr. x.*
Potassæ chloratis ʒj.
Acid. sulp. aromat. ʒss.
Infusi cascarillæ ʒiv. M.
ft. mist.
Capt. coch. ij parv. tertiâ
quâque horâ.

Use. Tonic; in similar cases to the last.

4. *℞. Quinæ phosphatis gr. vi.*
Acidi. phosp. dil. ʒj.
Tinct. cascarillæ ʒiv.
Aquæ ad. ʒvi. M. ft. mist.
Capt. coch. j larg. ter
indies.

Use. Tonic; in the same cases as the last.

5. *℞. Quinæ disulp. gr. vi.*
Tinct. aconiti gtt. iv.
Acid. sulp. dil. ʒss.
Aquæ ʒiv. M. ft. mist.
Capt. coch. j larg. ter
indies.

Use. In the acute stage of spreading inflammation of the skin, with much fever.

6. *℞. Quinæ disulp. gr. vi.*
Potassæ nit. ʒj
Acid. sulp. dil. ʒss.
Aquæ ʒiv. M. ft. mist.
Capt. coch. j larg. 3 ter-
tiâ quâque horâ.

Use. In the same cases as the last.

7. *R. Cinchonise sulp. gr. viii.*
Acid. sulp. dil. 3ss.
Aquæ ad. ʒiv. M. ft. mist.
Capt. coch. j larg. tertiâ
quâque horâ.

Use. In the same cases as the last.

8. *R. Cinchonise muriatis gr. x.*
Potassæ chloratis ʒj.
Acid. hydrochl. dil. ʒss.
Aquæ ad. ʒiv. M. ft. mist.
Capt. coch. j larg. ter
indies.

Use. Tonic; in asthenic inflammatory diseases of the skin.

9. *R. Cinchonise sulp. gr. xii.*
Sacch. alb. ʒij. M.
Et div. in pulv. xii capt.
j ter indies.

Use. Tonic.

10. *R. Cinchon. mur. gr. xii.*
Tinct. ferri. sesquichl. ʒj.
Acid. hydrochl. dil. ʒss.
Potassæ chloratis ʒij.
Aquæ ʒiv. M. ft. mist.
Capt. coch. ij parv. tertiâ
quâque horâ.

Use. In severe cases of asthenic erysipelas, with great tendency to spread.

11. *R. Cinchon. sulp. gr. x.*
Acid. sulp. aromat. ʒss.
Glycerinæ ʒss.
Inf. cascarillæ ʒiiiss.
M. ft. mist.
Capt. ʒij tertiâ quâque
horâ.

Use. In similar cases to the last, scrofulous affections, &c.

12. *R. Ext. cinchonæ ʒj.*
Liq. calcis ʒiv. M. ft. mist.
Capt. coch. ij parv. tertiâ
quâque horâ.

Use. In inflammatory affections of the skin, with gastro-enteric irritation.

13. *R. Ext. cinchonise ʒj.*
Acidi nitrici dil. ʒss.
Aquæ ʒiv. M.
Capt. coch. ij parv. ter
indies.

Use. Tonic; in scrofulous and spreading diseases of the skin.

14. *R. Ext. cinchonæ ʒj.*
Potassæ bicarb. ʒj.
Aquæ ʒiv. M. ft. mist.
Capt. ʒj ter indies.

Use. In chronic affections of the skin, and diarrhoea.

15. *R. Tinct. cascarillæ*
Tinct. aurantii aa ʒij.
Acid. nit.-hyd. dil. ʒj.
Aquæ ʒiv. M.
Capt. coch. ij parv. ter
indies.

Use. Tonic; in the acute stages of many skin diseases.

16. *R. Acid. nit. dil. ʒss.*
Infusi cascarillæ ʒiv. M.
Capt. coch. j larg. ter
quotidie.

Use. Tonic; in similar cases to the last.

17. *R. Tinct. calumbæ ʒss.*
Liq. calcis ʒvss. M.
Capt. coch. j larg. tertiâ
quâque horâ.

Use. In affections of the skin, with sickness and diarrhoea.

18. *R. Potassæ chloratis ʒss.*
Acid. hydrochl. dil. ʒj.
Infusi cascarillæ ʒiv.
M. ft. mist.
Capt. coch. ij parv. ter
indies.

Use. In the scrofulous affections of the skin.

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| <p>19. <i>R. Salicinæ gr. xx.</i>
 <i>Acid. acet. dil. ʒj.</i>
 <i>Syr. simp. ʒiv.</i>
 <i>Aquæ ʒiiiss. M. ft. mist.</i>
 <i>Capt. ʒij. ter indies.</i>
 <i>Use.</i> Tonic; may be given in almost any of the cutaneous affections.</p> <p>20. <i>R. Salicinæ ʒj.</i>
 <i>Tinct. ferri. acet. ʒij.</i>
 <i>Acid. acet. dil. ʒss.</i>
 <i>Aquæ ad. ʒiv. M. ft. mist.</i>
 <i>Capt. ʒij ter quotidie.</i>
 <i>Use.</i> In erysipelas, erythema, &c.</p> | <p>21. <i>R. Salicinæ gr. vi to xii.</i>
 <i>Sacch. alb. ʒj.</i>
 <i>M. et div. in pulv. vj.</i>
 <i>capt. j ter indies.</i>
 <i>Use.</i> Tonic.</p> <p>22. <i>R. Salicinæ gr. xx.</i>
 <i>Glycerinæ ʒss.</i>
 <i>Aquæ ʒvss. M. ft. mist.</i>
 <i>Capt. coch. j larg. ter. quâque horâ.</i>
 <i>Use.</i> Tonic; in the scrofulous affections of the skin.</p> |
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23. *R. Salicinæ gr. xx.*
Acid. hydrochl. dil. ʒss.
Potassæ chloratis ʒij.
Inf. cascariillæ ʒvi. M. ft. mist.
Capt. coch. j larg. ter indies.
Use. In scrofulous and asthenic inflammations of the skin.

IRON AND ITS PREPARATIONS.

THERE are but few diseases of the skin in children in which the preparations of iron may not be prescribed with advantage at some period of their course.

Some of these preparations are much more astringent, some are much more irritant, than others; and a careful selection of the preparation to be used should be made according to the purpose it is intended to fulfil. If any of them are administered injudiciously they will cause an increase in the febrile symptoms, constipation, thirst, headache, and will inevitably be followed by the reappearance or extension of the disease.

As a general rule, they should only be given after the administration of aperients and salines, and when the febrile symptoms and the signs of external inflammation have subsided.

In the treatment of many of the more severe diseases of the skin in children it is frequently a point of great moment, as well as of extreme nicety, to select the precise time for the withdrawal of salines and the substitution of ferruginous medicines; on the skill, however, with which this is done the rapidity and permanence of the cure frequently depends. It is generally advisable in commencing the administration of the salts of iron in such cases, and particularly when any doubt as to the propriety of prescribing them exists, to combine them with some saline, which may afterwards be gradually diminished and withdrawn, if necessary. In inflammatory affections of the skin of the asthenic type, and having a great tendency to spread with rapidity—as, for instance, in many cases of infantile erysipelas—the more powerful preparations of iron, such as the tincture of the sesquichloride, may be advantageously administered from the commencement of the disease.

In many of the cachectic affections—such as ecthyma and rupia, in the varieties of the phagedenic and diphtheritic diseases described in the text, in some forms of ulcerative scrofula, and in the latter stages of the syphilitic cachexia, the greatest benefit may frequently be obtained by the early and free administration of the preparations of iron in combinations suited to the peculiarities of each case.

In the cutaneous and subcutaneous varieties of scrofula the preparations of iron are very beneficial. They require to be given for a long period; and it is better to give them in small doses, and either with or immediately after the food.

If the bowels are allowed to become confined during

the administration of any of the ferruginous compounds the cutaneous affection for which they are given will almost certainly be immediately aggravated.

The perchloride of iron is the most astringent of all the preparations of iron. Its internal use in children is almost if not exclusively confined to cases of asthenic purpura, in which it is very efficacious.

The pulvis ferri, better known, perhaps, as QUEVENNE'S iron, is, on the whole, both the most efficacious and the best preparation for administration to children. A very small quantity of it will produce as great an effect as a much larger dose of any of the other preparations of iron. It is neither irritant nor astringent. It possesses the further advantage of being tasteless, and may be readily given even to children at the breast.

The lactate, saccharine carbonate, pyrophosphate, ammonio-citrate, ammonio-tartrate, and potassio-tartrate of iron, are all excellent preparations, not in any degree irritant, but all slightly astringent, and they may be given in any cases in which the ferruginous compounds are indicated. The iodide and bromide of iron are more irritant than any of the preparations above-described. They are apt to produce gastric disturbances in young children, and their administration cannot in general be continued for any length of time. Their use is mainly confined to the various scrofulous and scrofulo-syphilitic affections, and they are generally prescribed in combination with the iodides. The lactate of iron, the saccharine carbonate, and the pulv. ferri may be given in the form of powders, with sugar, or in any other suitable combination. The other preparations should be given in solution.

The sulphate of iron may be used with great advantage as a lotion in cases of erysipelas, or as first recommended by VELPEAU. It is also very useful when used in the

form of an ointment, not only in erysipelas, but in cases of erythema, chronic eczema, impetigo, and in the atonic ulcers following rupia and cachectic ecthyma.

The perchloride of iron is even more powerful than the sulphate when used in the form of ointment. It may be prescribed in similar cases, and also in the chronic stages of the scaly diseases. It appears to act as an alterative stimulant and astringent, and it in general produces a very rapid and beneficial effect in the peculiar condition of the skin remaining after the cessation of the exudative stage of the vesicular and pustular diseases. This ointment should be prepared in small quantities at a time, as it soon becomes rancid.

A. For Internal Use.

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| <p>1. <i>℞. Pulv. ferri gr. xii.</i>
 <i>Sacch. alb. ʒss.</i>
 <i>M. et div. in pulv. vi.</i>
 <i>capt. j ter. indies.</i>
 <i>Use.</i> As a tonic in any of the cutaneous affections occurring in children.</p> | <p><i>Use.</i> As a tonic in various cutaneous affections when the inflammatory symptoms are subsiding.</p> |
| <p>2. <i>℞. Ferri lactatis gr. xx.</i>
 <i>Sacch. alb. ʒss.</i>
 <i>M. et div. in pul. vj</i>
 <i>capt. j ter indies.</i>
 <i>Use.</i> The same as the last.</p> | <p>5. <i>℞. Ferri ammon. cit. ʒss.</i>
 <i>Potassæ nitratis ʒj.</i>
 <i>Aquæ ʒiv. M. ft. mist.</i>
 <i>Capt. coch. ij parv. ter indies.</i>
 <i>Use.</i> The same as the last.</p> |
| <p>3. <i>℞. Tinct. ferri sesquichl. gtt. xl.</i>
 <i>Potassæ chloratis ʒj.</i>
 <i>Aquæ ʒiv. M. ft. mist.</i>
 <i>Capt. coch. ij parv. tertiâ quâque horâ.</i>
 <i>Use.</i> In erysipelas and other cutaneous eruptions, attended with cachexia or great debility.</p> | <p>6. <i>℞. Ferri ammon-tart. ʒss.</i>
 <i>Potassæ acetatis ʒj.</i>
 <i>Aquæ ʒiv. M. capt. coch. ij parv. ter indies.</i>
 <i>Use.</i> The same as the last.</p> |
| <p>4. <i>℞. Ferri pyrophosp. ʒss.</i>
 <i>Sodæ phosp. ʒj.</i>
 <i>Aquæ ʒiv. M. ft. mist.</i>
 <i>Capt. coch. ij parv. ter indies.</i></p> | <p>7. <i>℞. Sol. ferri perchloridi gtt. xxx.</i>
 <i>Syr. simp. ʒss.</i>
 <i>Aquæ ʒiv. M. ft. mist.</i>
 <i>Capt. coch. ij parv. tertiâ quâque horâ.</i>
 <i>Use.</i> In asthenic hæmorrhagic purpura.</p> |

B. For External Use.

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| <p>1. <i>R. Ferri sulphatis</i> ʒj.
 <i>Aquæ</i> ʒviii M. ft. lotio.
 <i>Use.</i> In erysipelas and erythema.</p> <p>2. <i>R. Ferri sulphatis</i> ʒss to ʒj.
 <i>Cerat. cetacei</i> ʒiv. M. ft.
 ung.
 <i>Use.</i> In erysipelas, chronic stage of vesicular and pustular diseases, atonic ulcers, ecthyma, rupia.</p> | <p>3. <i>R. Sol. ferri perchloridi</i> ℥xx to ʒss.
 <i>Axungiæ</i> ʒiv. M. ft. ung.
 <i>Use.</i> Chronic scaly diseases, scaly stage of eczema, chronic stage of impetigo and achor.</p> <p>4. <i>R. Sol. ferri perchloridi</i> ʒj.
 <i>Glycerinæ</i> ʒijj. M. ft.
 lin.
 <i>Use.</i> In erysipelas.</p> |
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For formulæ containing the iodide and bromide of iron with the iodides, see Iodine and its Compounds.

PREPARATIONS OF MANGANESE.

THE sulphate and hypophosphite of manganese are the only preparations of that metal that are used in medicine. The effects produced by them bear a very close resemblance to those of the ferruginous compounds. When administered in moderate doses, they are less astringent, they do not accelerate the pulse or produce headache, and they are much less likely to induce any gastro-intestinal disturbance. These salts may, consequently, be given in any cutaneous affection accompanied by anæmia or great debility, in which the metallic tonics are indicated, and in which the preparations of iron either could not be prudently prescribed, or have had to be withdrawn on account of the exacerbation of the febrile symptoms produced by them. I generally prescribe them in combination with some dilute acid, such as the sulphuric or phosphoric, or with salines, such as phosphate or sulphate of soda, &c., according to the

nature of the case. In those cases in which more powerful tonics are required, and can be borne by the patient, I can strongly recommend the combination of the salts of manganese with extract of cinchona, or quinine, and, especially in anæmic cases, with small doses of the salts of iron, as in formula 5. The combination of these metals has long appeared to me to produce a much more powerful effect than either of them alone, even when administered in much larger doses.

1. *R. Manganesii hypophosphitis* ʒss.
Acid. phosp. dil. ʒss.
Aquæ ʒiv. *M. ft. mist.*
Capt. coch. ij parv. ter indies.

Use. In cutaneous affections with great debility, on the subsidence of the febrile symptoms.

2. *R. Manganesii hypo.* ʒij.
Sodæ phosphatis ʒj.
Acid. phosp. dil. ʒss.
Aquæ ʒiv. *M. ft. mist.*
Capt. coch. ij parv. ter indies.

Use. The same as the last.

3. *R. Manganesii sulph.* ʒj.
Acidi sulph. dil. ʒss.
Aquæ ʒiv. *M. ft. mist.*
Capt. coch. ij parv. ter indies.

Use. The same as the last.

4. *R. Manganesii sulp.* ʒj.
Cinchonisæ sulp. ʒss.
Acid. sulp. dil. ʒss.
Aquæ ʒiv. *M. ft. mist.*
Capt. coch. ij parv. ter indies.

Use. The same as the above.

5. *R. Manganesii sulp.* ʒj.
Sodæ sulp. ʒj.
Acid. sulp. dil. ʒss.
Aquæ ad. ʒiv. *M.*
Capt. coch. j larg. ter indies.

Use. The same as the last.

6. *R. Manganesii hypophosp.* ʒj.
Ferri pyrophosp. ʒj.
Acid phosp. dil. ʒss.
Aquæ ʒiv. *M. ft. mist.*
Capt. coch. ij parv. ter indies.

Use. A powerful tonic may be given in cases of asthenic erysipelas, scrofulous eczema, or in any cutaneous affections in which there is great debility and little fever.

7. *R. Manganesii sulp.* ʒj.
Quinæ disulp. gr. xv.
Acid sulp. dil. ʒss.
Aquæ ad. ʒiv. *M. ft. mist.*
Capt. ʒij ter quotidie.

Use. In the same cases as the last.

ZINC AND ITS COMPOUNDS.

THE oxide and sulphate of zinc and the citrate of zinc and iron are the only preparations of that metal that are administered internally in the cutaneous affections of children. The carbonate, oxide, iodide, and chloride are used for external application only.

The sulphate of zinc is a very powerful tonic and astringent, and, in larger doses, emetic. Its astringent effects are manifested on the cutaneous capillaries as well as on the bowels, but after it has been administered continuously for some days its constipating effects generally cease. It may be prescribed in almost any case in which metallic tonics are indicated, provided that care be taken to prevent constipation, in the first instance, and that no exudation from the skin is taking place. If it be administered whilst there is much discharge from the skin it will almost certainly check it, and thereby aggravate the disease; for it is always injudicious and unsafe to check any serous or sero-purulent discharges from the skin in any other way than by reducing the inflammatory and congestive condition of the cutaneous surface on which they depend. When combined with sulphate of soda and sulphuric acid it will be found very beneficial in the chronic period of the impetiginous and eczematous affections, and will frequently materially alleviate the troublesome itching which accompanies those affections. In the same combination it is also one of the most useful tonics that we can administer in cases of lichen and prurigo. It has this advantage over almost all other metallic tonics—that it seldom or never increases the itching of the skin. In the asthenic inflammations of the skin or the cachectic diseases and atonic ulcerations—from whatever cause arising, the sulphate of zinc, and extract of cinchona, and sulphuric

acid, will be found extremely useful, particularly in those cases in which the ferruginous preparations are not well borne.

The oxide of zinc may be given in the same cases and with the same precautions as the sulphate. It acts more powerfully and speedily when it is administered in solution with liquor potassæ, but it may be given in powder if preferred. When given in solution with liquor potassæ it is often of much benefit in chronic and long-standing cases of psoriasis, and, in fact, in any scaly condition of the skin.

The citrate of zinc and iron combines the properties of the two bases. It is a very useful preparation, and may be strongly recommended for administration to children; moreover, it possesses the great advantage of being almost tasteless.

Ointments containing oxide of zinc are more generally useful than any other ointments, with the exception of the calomel ointment, as applications to various morbid conditions of the skin. There are, in fact, few affections in which it is not very useful, provided that care be taken that the quantity of zinc is not sufficient to check the discharge from the skin if any be present, and that it be not used during the acute inflammatory period. In combination with calomel, bismuth, lead, &c., it is also particularly useful. Various formulæ for these ointments will be found below.

A For Internal Use.

1. *R.* Zinci oxydi gr. xvi.
Potassæ liq. ℥ xl.
Aquæ ʒiv. M. ft. mist.
Capt. coch. ij parv. ter
indies.

Use. In the chronic scaly diseases; psoriasis.

2. *R.* Zinci sulphatis gr. viii.
Sodæ sulphatis ʒj.
Acid. sulph. dil. ʒss.
Aquæ ʒiv. M. ft. mist.
Capt. ʒij ter Indies.

Use. Eczema and impetigo, in the chronic stage; lichen and prurigo.

3. *R. Zinci et ferri citratis* ʒj.
Acidi citric. ʒj.
Aquæ ʒiv. M. ft. mist.
Capt. coch. ij parv. ter-
tiâ quâque horâ.
Use. Tonic and astringent in
purpura.
4. *R. Zinci sulph. gr. viii to xv.*
Acid. sulph. dil. ʒss.
Ext. cinchon. ʒss.
Aquæ ad. ʒiv. M. ft. mist.
Capt. ij ter indies.
Use. As a tonic in cases in
which the preparations of
iron are contra-indicated.
5. *R. Zinci sulph. gr. x.*
Potassæ nitratis ʒj.
Acid. nit. dil. ʒss.
Aquæ ad. ʒiv. M. ft. mist.
Capt. ʒij ter indies.
Use. In prurigo, lichen, and
the scaly stages of eczema.
6. *R. Zinci oxydi gr. vi.*
Sacch. alb. gr. xx.
M. et div. in pulv. vi
Capt. j ter indies.
Use. In the chronic scaly
diseases.
7. *R. Zinci et ferri cit. gr. xii.*
Sacch. alb. ʒss. M. et
div. in pulv. vi capt. j
ter indies.
Use. Tonic and astringent;
in affections of the skin, with
debility and anæmia, when
not accompanied by much
inflammation.

B. For External Use.

1. *R. Bismuthi carbonatis gr. xii.*
Ung. zinci. ʒss.
M. ft. ung.
Use. In impetigo, eczema, and
lichen.
2. *R. Ung. hyd. nit. ʒij.*
Ung. zinci ad ʒss. M. ft.
ung.
Use. In chronic diseases of
the skin, with much itching.
3. *R. Ferri sulph. gr. viii.*
Ung. calaminæ ʒij.
Axungiæ ad. ʒss. M. ft.
ung.
Use. In chronic erythematous
affections.
4. *R. Zinci et ferri cit. ʒij.*
Ung. glycerinæ ʒss. M.
ft. ung.
Use. In the same cases as the
last.
5. *R. Bismuthi trisnit ʒj.*
Ung. calaminæ
Ung. hydrarg. aa ʒij. M.
ft. ung.
Use. In syphilitic pemphigus,
rupia, and ecthyma.
6. *R. Zinci iodidi ʒj.*
Ung. calaminæ
Axungiæ aa ʒiv. M. ft.
ung.
Use. In cutaneous and sub-
cutaneous scrofula.

LEAD AND ITS PREPARATIONS.

The preparations of lead are not employed internally in any of the cutaneous affections of children, but they are more extensively used than any other remedies as local applications in the form of lotions and ointments. The oxide, carbonate, nitrate, acetate, diacetate, and iodide, are all employed externally; with the exception of the latter they are all both sedative and astringent, and they are very efficacious in allaying the inflammation, itching, and irritation which accompanies almost all the acute affections of the skin in children. In the early stages of many of these diseases, lotions containing some of the preparations of lead are almost the only local applications that can be used with any certain benefit. If they are employed before any exudation has taken place they may be used according to the strongest formulæ given below. The object being to obtain the sedative and astringent effect as rapidly as possible; but if exudation has taken place, then they should be used in the weaker forms. These lotions are most effectively used by applying cloths soaked in them to the affected parts, but care should be taken not to continue their use for many days consecutively, as the continuous application of lotions of any kind has an injurious effect on the skin, renders it more likely to crack and become irritable after the disease has disappeared, and is almost certain to be followed either by the diffusion of the disease over a wider surface or by the appearance of some other and more chronic variety of the same disease on or about the part to which the lotions have been applied. These lotions should always be used cold, for when they are applied warm, as they often are, the injurious effects above described are more rapidly and certainly produced.

In the latter stages of the inflammatory diseases of the skin, when the surface of the skin is dry, scaly, and irritable, ointments containing lead may be used with excellent effect.

For External Use.

LOTIONS.

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| <p>1. ℞. Liq. plumbi diacet ʒj.
Spt. vin. rect. ʒss.
Glycerinæ ʒj.
Aquæ destillatæ ad.
ʒviij. M. ft. lotio.
<i>Use.</i> In eczema, achor, impetigo, in the exudative stage of erysipelas, erythema, &c.</p> | <p>4. ℞. Plumbi acetatis ʒij.
Pulv. opii ʒss.
Acid acetici dil. ʒss.
Aquæ distillatæ ʒviij.
M. ft. lotio.
<i>Use.</i> In any of the inflammatory diseases of the skin having a tendency to spread, particularly when attended with much itching and little exudation. Erysipelas, erythema.</p> |
| <p>2. ℞. Plumbi diacet ʒiij.
Spt. vin. rect. ʒss.
Aquæ ʒviiss. M. ft. lotio.
<i>Use.</i> In the earliest stages of the inflammatory diseases of the skin before exudation has occurred.</p> | <p>5. ℞. Plumbi nitratis ʒij.
Aquæ destillatæ Oss. M.
ft. lotio.
<i>Use.</i> As a lotion for ecthematous and other atonic ulcers.</p> |
| <p>3. ℞. Plumbi nitratis ʒij.
Acidihydrocyanicidil. ʒj.
Spt. vin. rect. ʒij.
Aquæ destillatæ ʒviij.
M. ft. lotio.
<i>Use.</i> To allay the irritation and itching in eczema, impetigo, &c.</p> | <p>6. ℞. Plumbi nitratis ʒj.
Acidi nitrici dil. ʒj.
Aquæ ʒviii. M. ft. lotio.
<i>Use.</i> As a wash in the ulcers following rupia, and in other atonic and phagedenic ulcers.</p> |
| | <p>7. ℞. Plumbi carbonatis ʒij.
Glycerinæ ʒj. M. ft. lin.
<i>Use.</i> In eczema and impetigo.</p> |

OINTMENTS.

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| <p>1. ℞. Plumbi oxydi hydr. ʒij.
Cerat. cetacei ʒss. M.
ft. ung.
<i>Use.</i> In the irritable and scaly conditions of the skin following the exudative diseases.</p> | <p>2. ℞. Plumbi carbonatis ʒj.
Ung. hyd. nit. ʒij.
Cerat. cetacei ad ʒj. M.
ft. ung.
<i>Use.</i> In the same cases as the last.</p> |
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OIL OF CADE.

THE oil of cade has within the last few years been very extensively used, especially on the continent, as a local application in the treatment of many diseases of the skin. It is a very powerful stimulant and resolvent, and there can be no doubt that its judicious use is productive of great benefit in many cases. Various opinions exist as to the cases and circumstances in which it should be used, and as to the best mode of applying it. Some practitioners recommend its use in almost every disease of the skin, and during any period of the disease—inflammatory or non-inflammatory—exudative or scaly; others think it should be prescribed only after the inflammatory stage has subsided. Some, again, recommend that it should be used undiluted; others that it should be mixed with equal parts of some less powerful oil, such as the almond or olive. Similar diversities of opinion exist as to the best mode of using it; some physicians advise that it should be applied lightly and sparingly to the parts affected, whilst others direct that it should be rubbed firmly on the skin and be allowed to dry on it. My own opinion is that no rules as to its degree of dilution or mode of application can be laid down as suitable to every case. If the oil be used—which it may be with great benefit in the acute stage of many of the inflammatory affections of the skin, as, for example, eczema—it should always be used undiluted, and should be applied very lightly and carefully to the affected parts by means of a little lint or cotton wool dipped in it; the superfluous oil should then be absorbed from the surface of the skin by means of a piece of dry linen carefully applied, and great care should be taken not to rub or wipe the inflamed surface. The oil should not on any account be applied more frequently

than once a day, and as a general rule every other day will be quite often enough. In cases of lupus and other scrofulous affections in which the inflammation is of a languid type and progresses slowly the oil should also be applied pure. In the sub-acute stage of the inflammatory affections it may be used diluted with equal parts of glycerine or of almond oil. In the chronic and scaly stages it may be advantageously used in a still more dilute form, and either as a liniment or in the form of an ointment: in those cases it may be applied two or three times a day to the skin by gentle friction, and it may be allowed to remain thereon. The dilute forms of the oil of cade will seldom produce much benefit in cases in which much inflammation is present, but in the dry and scaly stages they are very useful. This oil may be advantageously combined in certain cases with the oxide of zinc ointment, or with acetate of lead, &c., as in the formulæ subjoined.

1. ℞. Ol. cadini ℥iv.
Ung. glycerinæ ℥iv. M.
ft. ung.

Use. In the sub-acute stage of any of the inflammatory affections of the skin.

2. ℞. Ol. cadini ℥ij.
Ung. glycerinæ ℥vi. M.
ft. ung.

Use. In the same cases as the last.

3. ℞. Ol. cadini ℥ijj.
Ung. zinci ℥v. M. ft.
ung.

Use. In the sub-acute stages of eczema, &c.

4. ℞. Ol. cadini ℥ij.
Cerat plumbi acetatis ℥vi.
M. ft. ung.

Use. In the chronic stages of the exudative diseases.

5. ℞. Ol. cadini ℥vi.
Glycerinæ ℥vi.
M. ft. lin.

Use. In the chronic and scaly stages of the inflammatory diseases of the skin; e. g., eczema, impetigo.

6. ℞. Ol. cadini ℥iv.
Ol. amygdalæ ℥iv. M. ft.
lin.

Use. In the sub-acute stages of eczema, impetigo, &c.

7. ℞. Ol. amygd. ℥iv.
Ol. cadini ℥iv.
Zinci oxydi. ℥ij.
M. ft. lin.

Use. In cases where the exudation from the skin continues without diminution after the inflammatory and sub-inflammatory conditions have subsided.

CREASOTE.

CREASOTE is a caustic, stimulant, and astringent; and is used externally, either pure or in the form of lotion or ointment, as an application in various forms of skin disease, and as a dressing to the ulcers which follow some of them, such as lupus, rupia, and ecthyma. It may be used pure, or diluted with glycerine, as an application to any indolent ulcer of the skin, and also in cases of rapidly spreading infantile erysipelas. In the last-mentioned case it should be rapidly applied to the affected parts by means of a little cotton wool. In cases of psoriasis, pityriasis, and other chronic scaly affections it will be found very useful, when prescribed as in the formulæ given below. In combination with sulphur, it will sometimes exert a very beneficial effect over chronic and severe cases of lichen, and it is also very efficacious, in the same combination, when well applied in cases of scabies. None of the ointments containing creasote should be applied in those stages of cutaneous affections in which there is much serous or sero-purulent discharge from the skin.

1. *R. Creasoti gtt. xxx.*
Bismuthi trismit ʒss.
Axungiae ʒj. M. ft. ung.
Use. Stimulant and astringent.

2. *R. Creasoti gtt. xv.*
Cerat. plumbi acetatis
ʒss. M. ft. ung.
Use. In the scaly diseases.

3. *R. Creasoti gtt. xx.*
Potassæ carb. ʒss.
Axungiae ʒj. M. ft. ung.
Use. Psoriasis.

4. *R. Creasoti gtt. xxv.*
Acid. acet. dil. ʒss.
Aquæ ʒviii. M. ft. lotio.
Use. As a wash to the indolent
 ulcers in rupia, cachectic
 ecthyma, &c.

5. *R. Creasoti gtt. x.*
Ung. zinci ʒss. M. ft. ung.
Use. In psoriasis and pityriasis.

6. *R. Creasoti gtt. xx.*
Hyd. ammon.-chl. ʒj.
Cerat. cetacei ʒj. M. ft.
ung.
Use. In the same cases as the
 last.

7. *R. Creasoti* gtt. xx.

Sulp. præcip. gr. x.

Cerat. cetacei ℥j. M. ft.
ung.

Use. In the inveterate forms
of lichen and psoriasis, and
in scabies.

8. *R. Creasoti* gtt. xl.

Glycerinæ ℥j. M. ft. lin.

Use. In psoriasis and other
scaly diseases, and as a sti-
mulating dressing to indolent
ulcers.

9. *R. Creasoti* ℥j.

Glycerinæ ℥iij. M. ft.
lin.

Use. Lupus, atonic and spread-
ing ulcers, infantile erysipelas.

INDEX.

	PAGE		PAGE
ACHOR, description of	51	Asthenic gangrene, cases of	220, 229
does not affect mucous mem- branes	58	in the new-born	200
duration of	53	BROMINE and its compounds	286
influence of diet on	55	formulae for	287
never produces baldness	53	CACHECTIC cutaneous diseases	182, 184
" " cicatrices	53	diphtheria	222
non-suppurative adenitis in	53	duration of	186
predisposition to	55	ecthyma	191, 192
symptoms of	51, 52, 53	pemphigus	185, 191
following sudden cure of	56, 57	rupia	189, 191
synonyms of	51	treatment of	239
treatment of	83	Cachexia, gangrene in	207
ACNE, molluscoid	63	infantile 18, 24, 182, 184, 209, 275	
cases of	79, 80	meaning of	182
description of	64	mercurial	43
diagnosis of	70	modification of cutaneous af- fections by	275
Dr. Paterson on	71, 80, 81	parasitical	155
is it contagious?	74, 81, 83	scorbutic	178, 213, 214
microscopical structure of	73, 82	syphilitic	188
prognosis of	71	Classification of cutaneous dis- eases	2
progress of	66	Condylomata	11
seat of affection	73	Coryza, syphilitic	13
spontaneous cure of	67	Creasote	325
(1) by inflammation	67	formulae for	325
(2) by atrophy	69	Cutaneous diseases: modification of, by age 274, 276	
(3) by transformation	70	by cachexias 275	
synonyms of	63	by diatheses	274, 275
treatment of	88	diphtheria	224, 229
AGE, modification of cutaneous disease by	274, 276	tubercle	92
Ammonia, salts of	304	DARTRES	120
Anal fissures	12		
Animal parasites	166		
Aphonia, partial	212		
Arsenic and its compounds	301		
formulae containing	303		
Asthenic gangrene	195, 196, 201		

	PAGE		PAGE
Depilation	171, 172, 174	Favus, varieties of	157
Diathesis, modification of cutaneous diseases by	274, 275	GOURMES	104, 108
Diphtheria, cachectic	222	HÆMORRHAGE, cutaneous	176
pseudo-membranousexudations in	223	two varieties of	176
cutaneous	224, 229	Herpes tonsurans caused by	
ulcers in	225	trichophyton tonsurans	161
Diphtheritic ophthalmia	224	description of	160
trichophyton	161	trichophyton	161
ECHYMA, acute	243, 244	diagnosis	162
diagnosis of	245	from squamous eczema	162
duration of	244	from favus	162
prognosis in	245	parasitical origin of	161
structure of		prognosis in	162, 163
pustules in	244	state of hair in	161
symptoms of	244, 245	synonyms of	160
cachectic	192	treatment of	173
description of	192	Herpes, description of	250
diagnosis in	194	two forms of	250
prognosis in	194	phlyctenoides	250
treatment of	240	symptoms of	251
two forms of	192	diagnosis of	251, 252
ulcers in	193	duration of	253
Eczema, description of	127	neuralgia in	251
diagnosis of	133	labialis	252
of scalp	129	occurring in pneumonia	253
humid form of	129, 130	of the pharynx	253
squamous form of	129, 132	præputialis	253
simplex	127, 128	treatment of	269
treatment of	146	vulvaris	254
by arsenic	148	diagnosis of	255
Erysipelas, description of	266	ICTHYOSIS	141
accompanied by peritonitis	268	diagnosis of	143
blisters in	273	not attended by itching	143
fatality in new-born children	266	treatment of	153
treatment of	272	varieties of	142
Trousseau on	266	Impetigo	104
Erythema, description of	258	description of	106
febrile and non-febrile	258	larvalis	51
febrile, varieties of	258, 259	of face	108
non-febrile varieties of	260	treatment of	119
symptoms of	259	of scalp	106
treatment of	270	treatment of	118
FAVUS, caused by achorion schoenlenii	157	Inflammatory eruptions	243
description of	156	not contagious	243
diagnosis of	159	treatment of	268
of the nails	158	in parasitical diseases, treatment of	171
second period of	157, 158	Insecticides	171
situation of	153	Iodine and its compounds	279
third period of	158	eruptions produced by	281
treatment of	172		

INDEX.

329

	PAGE
Iodine, formulæ containing . . .	283
Iron and its preparations . . .	312
formulæ for . . .	315
LEAD and its preparations . . .	321
formulæ for . . .	322
Lepra, description of . . .	138
does not occur during early	
infancy . . .	135
duration of . . .	135
treatment of . . .	148
Lichen agrius . . .	125
description of . . .	124
does not become localised . . .	126
duration of . . .	124
prognosis . . .	126
treatment of . . .	145
Lupus, cicatrices of . . .	103
superficial . . .	99
treatment of . . .	114
by acid nitrate of mercury	114
arsenic . . .	115
biniodide of mercury . . .	116
cod-liver oil . . .	117
Dippel's oil . . .	115, 116
ulcerative . . .	101
with hypertrophy . . .	102
Lymphatic diseases . . .	50
treatment of . . .	83
MANGANESE and its prepara-	
tions . . .	316
formulæ for . . .	317
Mercury and its compounds . . .	288
formulæ for . . .	293
in syphilis . . .	41
Mercurial cachexia . . .	43
baths in syphilis . . .	43
phagedenic gangrene . . .	200
Molluscum. See Acne Molluscoid . . .	63
cases of . . .	77, 80, 81
Mucous patch . . .	11
contagious nature of . . .	17
synonyms of . . .	11
Mucous membrane:	
roseola of . . .	263
tetter of . . .	144
treatment . . .	145
NETTLE stings, treatment of . . .	271
Neuralgia in zona . . .	255, 256
treatment of . . .	270
herpes . . .	251
Nipples, influence of state of on	
health of children . . .	183

	PAGE
Nirles . . .	252
OIL of cade . . .	323
formulæ containing . . .	324
Onychia, syphilitic . . .	25
Ophthalmia, diphtheritic . . .	224
scrofulous . . .	110
Otorrhœa, syphilitic . . .	15
Overcrowding, injurious effects	
of . . .	183, 191, 195, 209
PARASITES . . .	155
animal . . .	166
symptomatic eruptions pro-	
duced by . . .	154
vegetable . . .	156
Parasitical cachexia . . .	155
diseases . . .	154
predisposition to . . .	155
treatment of . . .	170
treatment of inflam-	
matory eruptions	
in . . .	171
treatment of other	
eruptions in . . .	172
Parasiticides . . .	171
Pedicular disease . . .	170
treatment of . . .	170
Pemphigus, description of . . .	184, 185
cachectic . . .	185
in utero . . .	186
duration of . . .	185
diagnosis of . . .	186, 187
inflammatory . . .	185
is it syphilitic? . . .	187, 188
P. Dubois on . . .	184, 186
two varieties of . . .	185
Pemphigus, simple . . .	245
causes of . . .	248, 249
description of . . .	246
diagnosis of . . .	250
duration of . . .	248
prognosis of . . .	250
symptoms of . . .	246
treatment of . . .	268, 269
Pernio, causes of . . .	62
diagnosis of . . .	60, 61
phyctenæ in . . .	60
prognosis of . . .	63
symptoms of . . .	58, 59
treatment of . . .	85
Phagedenic gangrene . . .	194
asthenic . . .	195, 196, 201
in the new-born . . .	250
cachexia in . . .	213

	PAGE		PAGE
Phagedenic gangrene, causes of	209	Purpura, asthenic	177
diagnosis of	201, 202	diagnosis of	179
gangrene of mouth 194, 195, 196,	203	from ecchymoses	180
destruction of periosteum in	205	flea-bites	179
bone in	205	duration of	180
gangrene, treatment of	243	occurring during convales-	
by bichloride of mercury	200	cence	178
chlorate of potash	241	prognosis of	180
caustics	242	sthenic	177
of skin	196	symptoms of	177, 178
progress of	197	scorbutus	178
pulmonary alterations in	213	treatment of	181
ulcers	195	epistaxis in	181
of larynx	211, 212	ROSEOLA	261
case of	217	description of	261, 263
Pharynx, herpes of	253	of mucous membranes	263
Phyticides	171	syphilitic	31
Pityriasis, description of	138	treatment of	271
capitis	139	Rupia, description of	188
diagnosis of	133, 137, 140	always chronic	189
treatment of	152	accompanied by ca-	
varieties of	139	cachexia	189
Porriço	163	cachexia in	191
caused by microsporon au-		diagnosis of	191
dounii	164	escharotica, description of	190
description of	164	peculiar to in-	
diagnosis of	165	fancy	190
state of hair in	164	prognosis of	182
treatment of	174	prominens, description of	189
two forms of	164	simplex	189
Potash, salts of	304	description of	189
formulæ for		three varieties of	189
Pseudo-membranous exudations	223	treatment of	239
organisable	223	SCABIES, caused by acarus scabiei	166
not organisable	223	description of vesicles in	166
Pseudo-syphilis	19	pustules and	
Prurigo, description of	121	papulæ in 167, 169	
diagnosis of	123	sulci or cuni-	
not localised in children	122	culi in 168, 169	
treatment of	145	diagnosis of	167, 168, 169
Psoriasis, description of	135	suspension of during acute	
capitis	137	diseases	167
followed by alopecia	137	symptoms of	166
diagnosis of	137	treatment of	174
treatment of	148	Scrofulous diseases	89
arsenical prepara-		cicatrices	96
tions, in 148, 149		cutaneous tubercles	92
by baths	152	ophthalmia	110
cantharides	150	subcutaneous tubercles	92
copaiba	150, 151	treatment of	113
ointments	152	Soda, salts of	304
sulphur	150	formulæ for	307
varieties of	136	Strophulus	45
Purpura, description of	177, 178	diagnosis of	47, 48

	PAGE		PAGE
Strophulus, duration of	46	Treatment of pemphigus	268, 269
treatment of	48	inflammatory eruptions in	
varieties of	46	parasitical diseases	171
Sulphur and its compounds	297	other eruptions in	172
eruption produced by	299	parasitical diseases	170
formulsæ containing	300	pernio	85
Syphilis	8	phagedenic gangrene	240
acquired	5	pityriasis	152
congenital	7	porrigo	174
period at which it appears	10	prurigo	145
contagious nature of mucous		psoriasis	148
patch	17	purpura	181
diagnosis of	18, 23, 24	roseola	271
mucous patch in	11	rupia	239
pseudo	19	scabies	175
synonyms of mucous patch	11	scrofulous diseases	113
treatment of	40	strophulus	48
by baths of bichloride		syphilis	40
of mercury	48	urticaria	271
iodide of potassium	40	zona	269
mercury	41		
Syphilitic anal fissures	12	ULCERS, scrofulous	95
coryza	13	in cachectic ecthyma	198
condylomata	11	Urticaria, description of	263
erythema	31, 38	acute or chronic	264
onychia	25	causes of	265
otorrhœa	15	diagnosis of	265
roseola	81	febrile and non-febrile	263
vegetations	13, 26	produced by certain aliments	265
		prognosis of	265
TONICS, mineral	310, 312, 316	symptoms of	263, 264
Tonics, vegetable	309	acute	265
formulsæ containing	310	chronic	265
Treatment of achor	88	treatment of	271
cutaneous diseases	89		
ecthyma	240	Vegetations, syphilitic	13, 26
eczema	146		
erysipelas	272	ZINC and its compounds	318
erythema	270	formulsæ for	319
favus	172	Zona, description of	255, 256
herpes phlyctenoides	269	causes of	257
tonsurans	173	diagnosis of	257
ichthyosis	153	neuralgia in	255, 256
impetigo	119	pain in	256, 257
inflammatory eruptions	268	prognosis in	258
lepra	148	symptoms of	256
lupus	114	treatment of	269
lymphatic diseases	88	by excision of vesicles	269
lichen	145	cauterization of vesicles	269
molluscoid acne	88	neuralgia in	270
nettle stings	271		
neuralgia in zona	270		



